

FIRE HAZARD ZONING FIELD GUIDE



**UNIVERSITY OF CALIFORNIA
FOREST PRODUCTS
LABORATORY**

FIRE HAZARD ZONING FIELD GUIDE

May 2000

Gray Davis
Governor
State of California

Mary D. Nichols
Secretary for Resources
The Resources Agency

Andrea E. Tuttle
Director
Department of Forestry and Fire Protection

Woody Allshouse
Acting State Fire Marshal
Department of Forestry and Fire Protection

TABLE OF CONTENTS

ACKNOWLEDGEMENTS	3
FOREWORD	4
1. INTRODUCTION	5
2. URBAN –WILDLAND INTERFACE	6
2.1 Analysis of the Problem	6
2.2 Special Fire Problems	6
3. FIRE HAZARD ZONING	8
3.1 Background	8
3.2 State Land Use Planning Responsibilities	9
3.2a Hazard Assessment and Classification	9
3.2b Public Notification	9
3.2c Designation of Hazard Areas	9
3.2d Fire Safe Standards	11
3.2e Periodic Review	13
3.3 Local Land Use Planning Responsibilities	13
3.3a Hazard Assessment and Classification	13
3.3b Public Notification	14
3.3c Designation of Hazard Areas	14
3.3d Fire Safe Standards	16
3.3e Periodic Review	17
3.4 Updates of Classifications and Designations	17
3.5 Tools for Hazard Assessment	18
3.5a Bates Bill System	18
3.5b Fire Hazard Zoning Working Group System	21
3.5c Brian Barrette’s System for Rating Structural Vulnerability	28
3.6 Hazard Assessment After the Fact	29
4. NATURAL HAZARD DISCLOSURE FOR WILDFIRE	30
4.1 Local Responsibility Areas	30
4.2 State Responsibility Areas	30

APPENDICES

- A. BIBLIOGRAPHY
- B. GLOSSARY OF TERMS
- C. ATTORNEY GENERAL'S OPINION NO. 92-807, FIRE SAFE STANDARDS
- D. ATTORNEY GENERAL'S OPINION, CLEARANCE REQUIREMENTS WITHIN INCORPORATED CITIES
- E. SRA FIRE HAZARD SEVERITY ZONING SUMMARY
- F. LRA VERY HIGH FIRE HAZARD SEVERITY ZONING SUMMARY
- G. MODEL ORDINANCE FOR VERY HIGH FIRE HAZARD SEVERITY ZONE ADOPTION
- H. ROOFING REGULATIONS SYNOPSIS
- I. MODEL ORDINANCE FOR THE DEFENSIBILITY OF SPACE AND STRUCTURES
- J. MODEL ORDINANCE COMPLIANCE CHECKLIST
- K. STATUTES AND REGULATIONS

ACKNOWLEDGEMENTS

This guide was made possible by the [Federal Emergency Management Agency](#) (FEMA) [Hazard Mitigation Grant Program](#), project 1005-47, and was administered by the [Governor's Office of Emergency Services](#) (OES). We would like to express our appreciation to FEMA and OES for their support.

This Guide was developed as a cooperative effort by the [University of California Forest Products Laboratory](#) and the Fire Hazard Zoning Working Group comprised of representatives from the [United States Forest Service](#) (USDAFS), [Bureau of Land Management](#) (BLM), [California Department of Forestry and Fire Protection](#) (CDF), and other interested individuals.

Special thanks should be given to the following individuals for their assistance:

- Robert Irby, Deputy Chief, CDF/Office of the State Fire Marshal, Fire Engineering
- Brian Barrette, Grants Administrator, CDF/Office of the State Fire Marshal
- Carol L. Rice, President, Wildland Resource Management Inc.
- Melissa Frago, Research and Writing Consultant
- Jeannie Smith, Deputy State Fire Marshal, CDF/Office of the State Fire Marshal, Fire Engineering

FOREWORD

In the twenty-five year period of 1955 through 1979 there were 2,408 structures lost to wildfire, yet in the fourteen years following (1980-1993) over three times as many structures (7,698) were lost. From 1990 through 1999, 6,309 structures were lost to wildfires in just nine events. This clearly demonstrates the changing makeup of the wildlands in California. 954 structures, 174 of which were homes, were lost during the 1999 fire season in Shasta County. This demonstrates that the potential for disaster exists. Because of that potential, this study was undertaken.

Fire hazard assessment and zoning have been an issue in California since before the 1961 Bel Air fire, and following each disaster there are usually a number of legislative proposals designed to mitigate the next disaster. Yet despite these new laws, disasters continue to occur. The last significant disaster (before 1999) was the Southern California firestorm of 1993, and additional legislation was enacted shortly thereafter. The appendix of this report contains copies of many of the more significant statutes affecting assessment, zoning and mitigation.

The objective of this *Fire Hazard Zoning Field Guide* is to provide accurate and updated information to CDF Ranger Units, local fire districts and land use planners about the sensitive issues of fire hazard assessment and zoning. It is hoped that as public awareness increases, local agencies and residents alike will recognize their responsibility to support and participate in the implementation of pre-fire safety strategies. Strong public backing and sound long-term planning can help Californians effectively protect residents from fire in the Urban-Wildland Interface.

The California Department of Forestry and Fire Protection hopes this document will be well used to help enhance pre-fire management and minimize damage to developments in the [Urban-Wildland Interface](#). Users should copy graphics, quote regulations, etc. to expand the use of the information contained here.

[This document contains several hyperlinks to other documents and on-line sources of information about structural fire prevention and protection, to assist users in obtaining additional information.](#)

1. INTRODUCTION

The objective of publishing and distributing this Guide is to help reduce and prevent losses of life, property and natural resources from wildfire in the Urban-Wildland Interface. Loss reduction can be achieved partly through proper implementation and enforcement of fire hazard zoning and mitigation laws. This document discusses those types of laws that are state mandated.

Fire hazard zoning is one of the first steps in a comprehensive land use plan. It can also help local agencies to educate the public about wildfire hazards. By zoning fire hazards, policy makers acknowledge that there is a wildfire problem in the area that needs to be mitigated. This is also a way to make the public aware that they need to take certain measures in order to protect themselves from losses. These measures cannot be carried out without the cooperation and support of the community. Even though homeowners may want to choose for themselves how or even if mitigation should be undertaken, the minimum fire safe standards discussed here are laws, and there is a demonstrated need for their implementation and enforcement. In learning why fire hazard zoning is important to them, the public can realize that the prime responsibilities—and opportunities—for hazard mitigation are theirs. This public support of fire hazard zoning and mitigation practices can help in many ways, especially by addressing certain problems and concerns prior to implementation.

This Guide covers fire hazard zoning in the state of California, in both [State Responsibility Area](#) (SRA) and [Local Responsibility Area](#) (LRA) lands. It discusses how and why state mandated fire hazard zoning and mitigation strategies have been enacted, and it attempts to clarify some aspects of the process about which questions have often been raised. This Guide also described various [fire hazard assessment](#) and [classification](#) systems that can be used in California by local agencies or other entities. This Guide will be a tool for fire agency personnel and local land use planners who are involved in the creation and implementation of local fire hazard zoning strategies, including 1) assessment of hazards, 2) mapping options, 3) drafting of ordinances, 4) engaging community support, 5) funding options, 6) enforcement, and 7) standards and regulations.

The uses for fire hazard zoning are many. Once fire hazards have been classified, zoning allows local planners to implement land use standards that agree with the state legislature's mandates. These standards can apply to various aspects of land use, including but not limited to 1) [structural components](#) such as roofing, 2) [defensible space](#) standards such as vegetative clearance around structures, 3) [infrastructure](#) such as fire apparatus access and water supplies, and 4) preventative [land use planning](#) such as greenbelts and fuel breaks. Fire hazard zoning is also an effective tool for [public education](#) and awareness. By publicizing fire hazard zoning information, local planners can help educate property owners about their values at risk from wildfire and the options available to them for reducing hazards.

Information about [Natural Hazard Disclosure](#) (NHD) in the SRA and the LRA is also covered in this Guide, as it is closely related to fire hazard zoning. As a result, this Guide may be of use to real estate agents and disclosure firms that should be abreast of these regulations. It is also useful for fire agency personnel to be informed about NHD since related questions may arise from local property owners.

It is now the responsibility of local planners and those who implement fire safe regulations to apply these strategies using common sense. This guide will assist in implementation and help promote positive action.

2. URBAN-WILDLAND INTERFACE

2.1 Analysis of the Problem

Rural and wildland development has continuously and increasingly impacted wildland fire protection in interface areas. When structures that lack built-in fire protection—such as defensible space—burn, California Department of Forestry and Fire Protection ([CDF](#)) fire suppression apparatus and personnel need to be diverted from their primary purpose—natural resource protection—in order to protect structures at risk. The results of this diversion can be more acres burned, higher natural resource losses, and greater fire protection and rehabilitation expenses incurred. Additionally, more homes can be destroyed, and more lives are lost or put at risk.

Historically, the state has taken responsibility for wildland fire protection, while local agencies govern land use planning and development. Partly because of this separation of authority, areas known today as the [Urban-Wildland Interface](#) have continued to grow. Such an increase in the number of dwellings intermingled with wildland fuels has created statewide wildfire problems. This increase in the number of dwellings creates an additional level of risk, by concentrating flammable fuels into relatively small areas, depending on the density of developments.

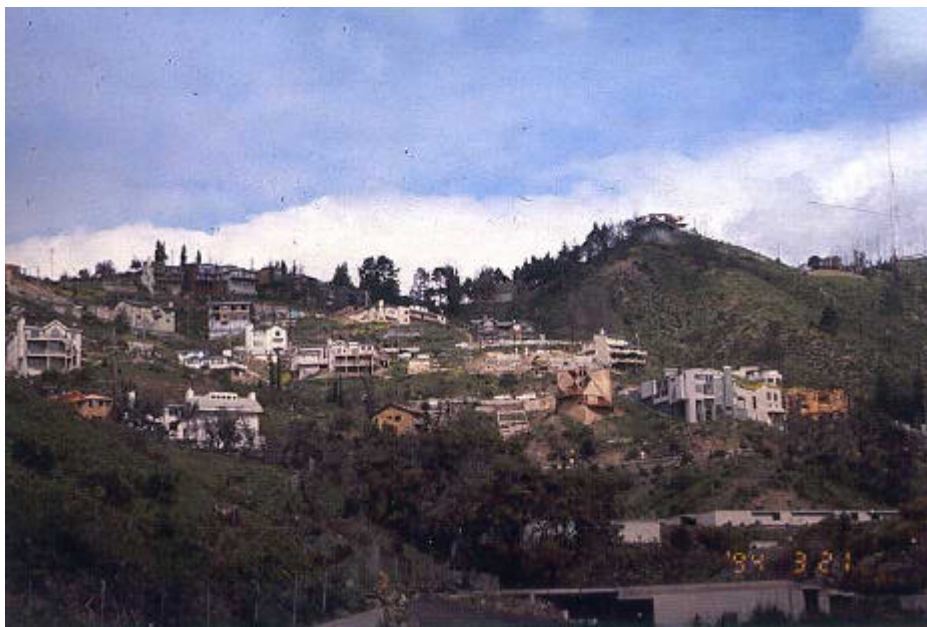


Figure 2.1 – Urban Wildland Interface, Dense Development

2.2 Special Fire Problems

Wildfire is part of California's normal ecological processes, acting as both a benefit and a detriment to our natural resources. When people recreate in and develop mountainous, forest and brush-covered lands, however, wildfires become a threat to public safety, life and property. Combined with California's

Mediterranean climate—wet, warm winters that promote vegetative growth and hot, dry summers that make the growth highly flammable—recreation and development in the Urban-Wildland Interface can be dangerous. These threats are special problems in California that have vexed lawmakers, firefighters, planners and residents for many years. Repeated efforts at state and local levels have shown some benefits, but have far from erased the wildfire problems faced by many Californians. Much has yet to be done to curb the tide of destruction.



Figure 2.2 – Aerial View of Oakland/Berkeley Hills Tunnel Fire (1991)

People's interaction with this disturbance-driven ecosystem has led to decades of [disastrous conflagrations](#). Early in the 20th century, even wildfires that encroached on populated areas did not tend to consume a large number of houses. Since the density of development in these areas has significantly increased over the last few decades, fires that otherwise may have burned out are destroying, and even being fueled by, structures and other elements of development. For example, the most severe individual Urban-Wildland Interface fire yet experienced in California was the Oakland/Berkeley Hills Tunnel Fire in October of 1991. The devastation can be seen and felt in the photograph shown above. The statistics for this fire indicate that over 2,900 structures were damaged or destroyed—most within a few hours—and 25 people perished, including both firefighters and civilians.

Lack of defensible space and fire safe infrastructure such as roads accessible by fire equipment and evacuees, contributed greatly to the losses in this fire. In a situation like this, fire crews can not defend every threatened structure. Sound measures must be taken to protect life and property before fires start. Since not every residence can be protected by firefighters, state and local governments must help the people help themselves. One way to do this is through [fire engineering](#), which provides such benefits as licensing, product evaluation, hazardous materials and pipeline safety, fire safe planning, and collection and analysis of fire-related data for improvement of existing regulations, and for creation of new, performance based codes. [Enforcement](#) of such pre-fire zoning and hazard mitigation regulations also contributes to public safety. Another way to help people is through [education](#) of the public about the importance of such laws and the options available to help make our homes and our [communities more fire safe](#).

3. FIRE HAZARD ZONING

3.1 Background

Wildfire is a standard occurrence in California. It occurs with regular frequency, and can be most hazardous when combined with unawareness or denial by the public and/or policy makers. As long as history has been recorded, there have been reports of large conflagrations that affect residents. Lawmakers, planners and developers are all aware of the risks associated with developing the wild lands for residential and commercial usage. Residents, in some cases, are also aware of these risks. It seems, however, that many do not realize the level of responsibility they must assume for their own safety, because firefighters can not possibly protect every structure when a wildfire approaches. People might think, “The fire department will protect my home and family if we are in danger from wildfire,” but this view can be harmful or fatal. Fire prevention and protection agencies often work at maximum capacity to protect life, property and natural resources. But people who live in hazardous areas must also rely on the pre-fire strategies available to them for protection from wildfires. Those who do use these strategies will be at the lowest risk of destruction and the highest probability for intervention by firefighters and survival from a fire threat.



Figure 3.1 – Effective Defensible Space around a Structure

Fire hazard zoning is important to Californians, since the threat of wildfire is very real. The CDF firefighters, fire engines and aircraft respond to an average of 7,500 wildland fires per year, and over 1500 structures were destroyed by wildfires in 1999 alone. Fire hazard zoning can tell Californians where wildfire and other natural hazards exist. Similarly, planners and developers should responsibly consider such hazards when building in hazardous areas. State and local governments have a responsibility to public safety, and wildfire is a central issue in many jurisdictions. A useful definition for fire hazard zoning is: “A *planning and regulatory activity (typically conducted by a local agency such as a city or county) which provides criteria for what kinds, how many and under what conditions development or other activities should be regulated in areas of various hazard classifications*” (Harrell 1999).

Hazard identification (or [assessment](#)), [classification](#) and [zoning](#) are three distinct processes for purposes of this guide. It is important that the distinctions between these processes be clear to local planners and fire agencies. Assessment, classification and zoning of fire hazards can be used for several purposes, but they are most important for recognizing, delineating and mitigating such hazards. They are also effective tools for bringing fire safety issues into the public eye.

3.2 STATE LAND USE PLANNING RESPONSIBILITIES

“The board shall classify all lands within the state, without regard to any classification of lands made by or for any federal agency or purpose, for the purpose of determining areas in which the financial responsibility of preventing and suppressing fires is primarily the responsibility of the state. The prevention and suppression of fires in all areas that are not so classified is primarily the responsibility of local or federal agencies, as the case may be.” (Public Resources Code § 4125(a))

“It is the intent of the Legislature that decisions affecting the use of land in state responsibility areas result in land uses which protect life, property, and natural resources from unreasonable risks associated with wild land fires.” (Public Resources Code § 4128.5(a))

These sections of the [Public Resources Code](#) (PRC) clearly show that lands classified SRA for fire protection must also be developed in such a way as to help protect the public from wildfire risks. This need requires state and local agencies to cooperate in this regard, since CDF can make recommendations but does not dictate local land use planning decisions. Local governments ultimately decide what local actions will be.

3.2a. Hazard Assessment and Classification

[PRC Sections 4201-4204](#) were enacted statewide in 1982 after fires in San Bernardino, Napa, and Los Angeles Counties destroyed over 500 structures between 1980 and 1982. These sections required that the CDF classify all SRA lands into fire hazard severity zones according to the severity of fire hazards determined to exist in various areas. The purpose of this requirement was to identify measures to retard the rate of wildfire spread, and to reduce the potential intensity of wildfires that could destroy resources, life, and property. By law, the zones must embrace relatively homogenous lands, and the fire hazard severity rating must be based on [fuel loading](#), [slope](#), [fire weather](#), and [other relevant factors](#).

3.2b. Public Notification

For SRA fire hazard severity assessment, once those hazards have been identified by CDF, the information about hazards is transmitted to local governments. The public should be notified of the findings via public hearings and other local means. Maps containing the hazard severity information determined by CDF can be purchased by the public through [Teale Data Center](#). On the next page is a copy of an SRA fire hazard severity map.

3.2c. Designation of Hazard Areas

“No designation of a zone and assignment of a rating shall be adopted by the director until the proposed regulation has been transmitted to the board of supervisors of the county in which the zone is located at least 45 days prior to the adoption of the proposed regulation and a public hearing has been held in that county during that 45-day period.” (PRC 4203(b))

Even though CDF is responsible to identify hazards and assign severity ratings, it does not usually decide how those hazards will be dealt with. Local governments and other parties who choose to involve themselves with public hearings will determine whether or not and how wildfire hazards will be mitigated. Generating public support and playing an active role in public hearings can be an effective way for fire service personnel and other concerned citizens to help acknowledge and affect the need for fire safe standards.

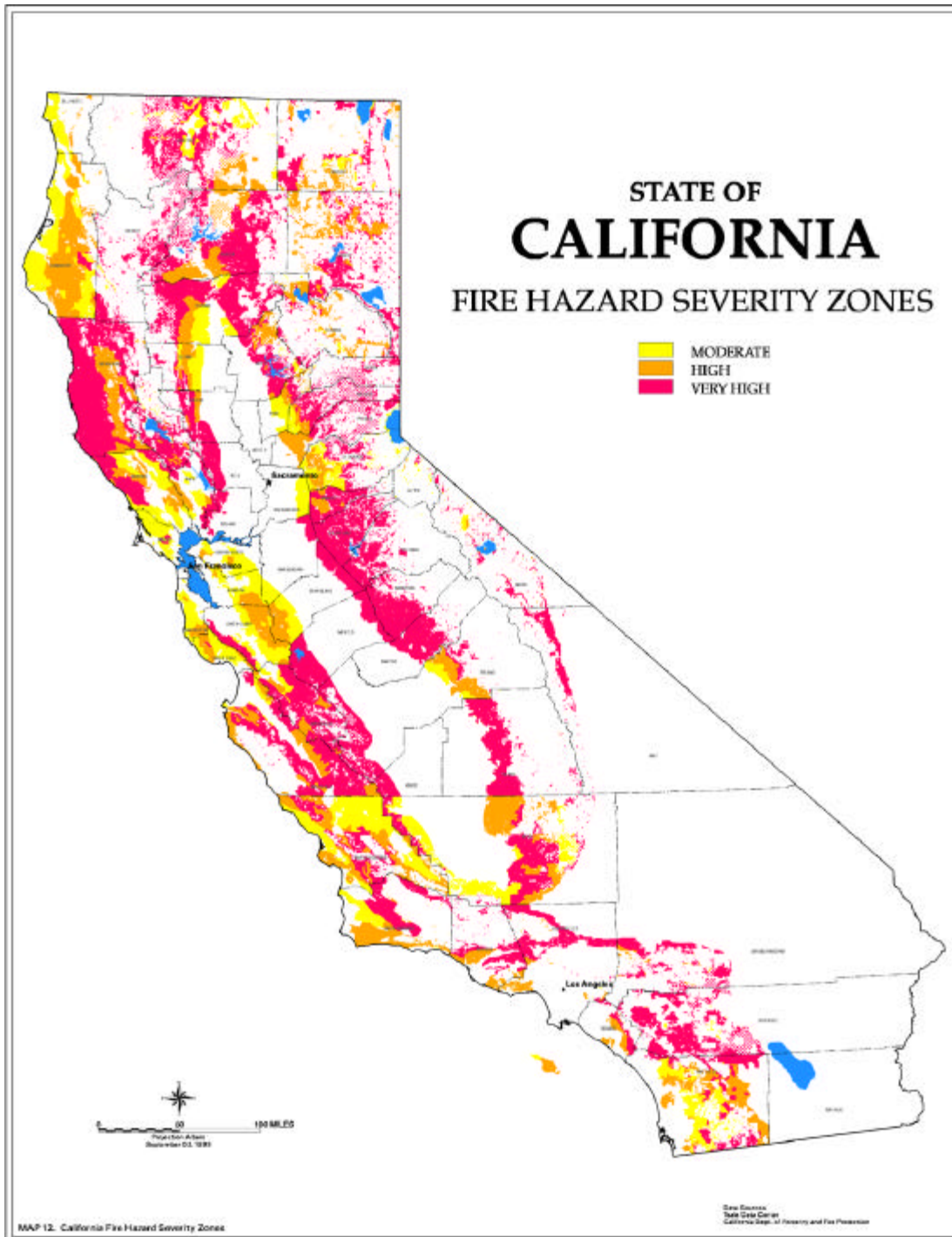


Figure 3.2 – State Responsibility Area Fire Hazard Severity Map

3.2d. Fire Safe Standards

With increasing development in the Urban-Wildland Interface, the 1980's and 1990's have shown Californians some of the most devastating wildfire damage ever experienced in the state. Nearly 1,500 structures in the 1980's and over 6,000 structures in the 1990's were destroyed by wildfires that encroached on Urban/Wildland Interface populations. California lawmakers were compelled to help mitigate these losses in the future. As a result of this dramatic increase in damages, related legislation began to emerge to address these problems directly. In 1991, Senate Bill 1075 (Rogers) passed, enacting minimum fire safety regulations in the SRA through [PRC Section 4290](#). Senator Rogers first introduced this bill in 1987. It was an attempt from a different angle to mandate fire safe land use planning where fire protection was under state jurisdiction. These lands were experiencing extensive rural and wildland development which needed to be managed to avoid undue loss from wildfire. However, these lands were and still are under local agency jurisdiction for the purpose of development and land use planning. Through SB 1075 and associated public hearings, the requirements found in PRC 4290 were enacted. The regulations are intended for the purpose of protecting natural resources from out-of-control structure fires, but it is important to note that they also serve to protect structures from wildfire at the same time. The regulations address several major elements of land use, development, and construction:

- Vegetation clearance around structures standards



Figure 3.3 – Vegetation Clearance



Figure 3.4 – No Vegetation Clearance

- Road and access standards



Figure 3.5 – Safe Fire Equipment Access



Figure 3.6 – Unsafe Fire Equipment Access

- Signage and building identification standards



Figure 3.7 – Street Sign



Figure 3.8 – Building Address

- Fuel break and greenbelt standards



Figure 3.9 – Fuel break



Figure 3.10 – Greenbelt

- Private water supply requirements

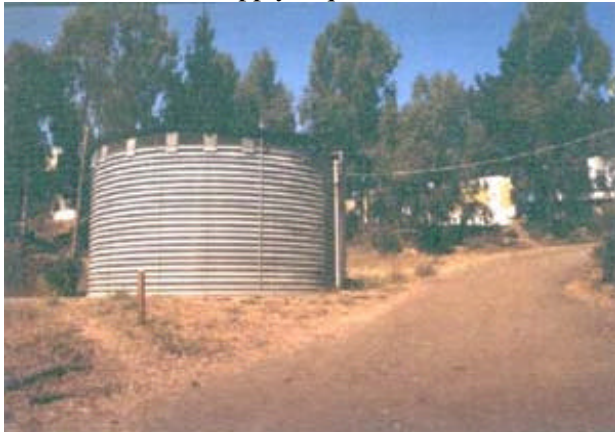


Figure 3.11 – Water Supply Tank

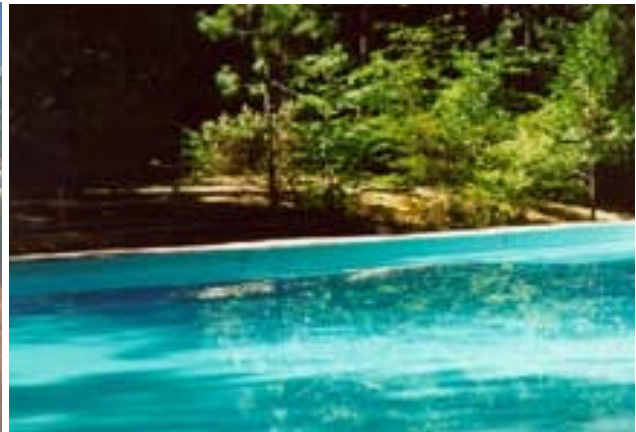


Figure 3.12 – Swimming Pool Source

The detailed fire safety standards adopted by the State Board of Forestry pursuant to PRC 4290 can be found in Title 14 of the California Code of Regulations, especially [Sections 1270-1276](#). Unless a county received certification of another ordinance through the State Board of Forestry prior to September 1, 1991, these regulations took effect as minimum standards in the SRA. They are triggered by application for a building or use permit for any non-existing structures, roads, or driveways being constructed in a state responsibility area. If they are not adopted by local ordinance, they are enforceable by default. However, identification of the enforcing entity remains a quandary. In these areas, code enforcement questions still arise that are not answered sufficiently by either local fire district personnel or local Ranger Unit personnel.

3.2e. Periodic Review

CDF is responsible to periodically review zones designated and rated according to SRA fire hazard zoning regulations and, as necessary, to revise zones or their ratings or repeal the designation of zones. Any revision of a zone or its rating or any repeal of a zone must conform to the requirements of [PRC Section 4203](#), which requires local public hearings ([PRC § 4204](#)). The same confusions about CDF and local government roles also apply in regard to periodic review, then, since local ratification of CDF recommendations must still occur.

3.3 LOCAL LAND USE PLANNING RESPONSIBILITIES

“Fires are extremely costly, not only to property owners and residents, but also to local agencies. Fires pose a serious threat to the preservation of the public peace, health, or safety. Since fires ignore civil boundaries, it is necessary that cities, counties, special districts, state agencies, and federal agencies work together to bring raging fires under control. Preventive measures are therefore needed to ensure the preservation of the public peace, health, or safety.... The prevention of fires is not a municipal affair..., but is instead, a matter of statewide concern.” (Government Code § 51175)

Local governments have a responsibility to regulate planning and development in consideration of local and regional public safety. Moderate, High and Very High fire hazards exist throughout the state, and fire knows no boundaries. As a result of this knowledge and in response to repeated, costly disasters, the California legislature has attempted to mandate certain minimum requirements for development and maintenance of fire hazardous areas. The first logical steps in this process would be to assess and classify the hazards present in a given area, then enact the appropriate zoning and development requirements in that area based on the hazards and risks identified. It sounds easy enough, but this process has proven problematic, since one must overcome several political hurdles to make such a legal designation. But these areas do contain substantial hazards and risks that must be acknowledged and mitigated. However, developers, local planners and residents all have a vested interest in maintaining a low profile when it comes to fire and other natural hazards, since it is perceived that such distinctions provoke negative reactions by real estate buyers and insurance companies.

3.3a. Hazard Assessment and Classification

In accordance with [Assembly Bill 337](#) (Bates), passed in 1992, CDF was required to identify and classify fire hazards in the LRA. Though this classification was referred to in the legislation as an identification of “[very high fire hazard severity zones](#)” (VHFHSZ), it was not technically “zoning,” since all land use planning decisions in the LRA are still under the local agency’s jurisdiction. Therefore, the use of the term VHFHSZ in the legislation served to confuse the agencies involved as to who was responsible for local fire hazard assessment, classification and zoning. This section will attempt to clear up any confusion about this issue.

After the Oakland/Berkeley Hills Tunnel Fire (and the disasters experienced in earlier years), state lawmakers then felt the time was appropriate to enact statewide fire safety measures in the LRA, so Assembly Bill 337 (Bates) was drafted and passed. The new state law mandated LRA fire hazard assessment and zoning, and included related minimum fire safety standards to be adopted at the local level (see Government Code § 51175-51189).

The Department of Forestry and Fire Protection was assigned the task of identifying VHFHSZ in the LRA based on present fire hazards, including fuels, weather, topography and structure density. This task was undertaken in cooperation with local agencies. A protocol was developed, along with a [Criteria and Factors](#) review sheet, then topographical maps of each county were reviewed and signed off by Ranger Unit personnel and local fire protection officers once any VHFHSZ had been identified. These reviews took place in late 1994 and throughout 1995. A resulting set of digitized maps are available in print form to the local agencies through [Teale Data Center](#) for an average cost of \$35, plus shipping and handling, if they wish to obtain them. These LRA VHFHSZ maps are also available on the Internet at <http://www.ceres.ca.gov/planning/nhd>.

3.3b. Public Notification

Local agencies containing VHFHSZ must make available to the public within 120 days of notification by CDF. The information presented to the public must be in an easy to understand format, including, but not limited to, maps ([Government Code § 51179](#)). Those local jurisdictions that contain one or more VHFHSZ were notified in writing by CDF of the identification and were alerted to the 120-day deadline for public notification. Any updates conducted by local agencies would fall under the same public notification requirements.

3.3c. Designation of Hazard Areas

According to Government Code §51179, enacted by the Bates bill, local agencies can accept or reject the CDF VHFHSZ assessment and delineation. Local agencies can also alter and update VHFHSZ boundaries as deemed necessary. Approximately fifty-two jurisdictions with areas that otherwise would have been identified with a VHFHSZ had claimed to meet or exceed the requirements of AB 337 at the time of the original assessment review in 1994 and 1995. Some have provided appropriate documentation of the minimum standards, while others have not. These jurisdictions were not required to designate a VHFHSZ because Government Code Section 51179 reads, “*A local agency shall be exempt from this requirement if ordinances of the local agency, adopted on or before December 31, 1992, impose standards that are equivalent to, or more restrictive than, the standards imposed by this chapter.*” This means that any jurisdiction that already had vegetation clearance regulations that were equal to or more stringent than [GC 51182](#), plus a Class B roofing minimum, could essentially ignore the VHFHSZ recommendations made by CDF. As a result, true hazards throughout the state were not necessarily identified pursuant to AB 337. In fact, there are many areas in the state of California that qualify, according to several different hazard assessment systems, as VHFHSZ. Local jurisdictions with a VHFHSZ identified by CDF but not recognized locally are nevertheless subject to Natural Hazard Disclosure requirements (see [Section 4](#)), even though they may not enforce the associated defensible space and roofing requirements.

For example, no VHFHSZ appear on the Alameda County map, even though all of the conditions exist to qualify certain areas as VHFHSZ. Unfortunately, the hazard assessment system developed because of the Bates bill was not applied effectively throughout the state, resulting in non-identification of certain hazardous areas. This problem could be rectified with updated assessments of hazards by local jurisdictions and with proactive zoning conducted by local governments.

This graph demonstrates levels of local agency compliance with fire safe codes in and out of VHFHSZ.

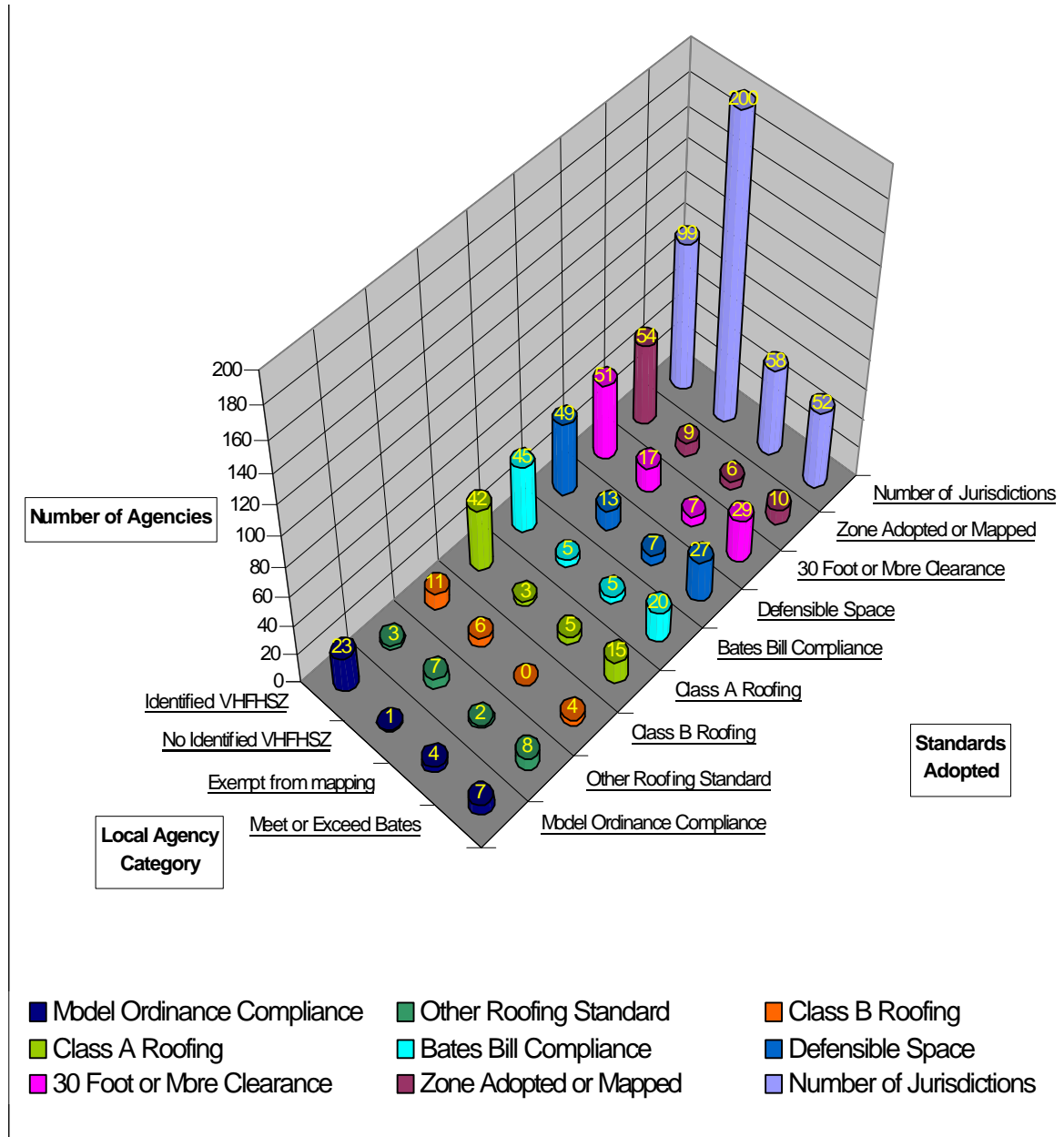


Figure 3.13 – Local Agency Fire Safe Code Compliance

3.3d. Fire Safe Standards

The vegetative clearance and structural requirements enacted in GC 51182 via AB 337 match the regulations of PRC 4291, which had been effective in the SRA since 1985. AB 337 also included a minimum Class B roofing requirement pursuant to [Health and Safety Code section 13108.5](#), which was cross-referenced to [PRC 4201](#) and [GC 51178](#), so that roofing regulations would be applicable in the LRA and the SRA. The logic behind this new roofing minimum requirement was that the areas that were being rated tended to be in moderately to densely populated areas. An ignition-resistant roof covering could mean a significant reduction in the probability and rate of fire spread from house to house via [firebrands](#).

It was only a matter of time before state lawmakers mandated additional fire safety regulations in VHFHSZ, which could be one reason some LRA agencies did not participate in the original hazard assessment. During the implementation of the AB 337 assessment reviews by CDF and the local agencies, a series of severe fires now known as the Southern California Firestorm occurred in 1993. In the aftermath of this disaster, which destroyed 1,171 structures, House Speaker Willie Brown authored [Assembly Bill 3819](#). This new law addressed the roofing requirements in not only LRA VHFHSZ per GC 51178, but also in SRA areas rated as High and Very High fire hazard severity per PRC 4201. AB 3819 increased the roofing requirements in these areas to Class A via [Health and Safety Code 13132.7](#), and to Class B in all other areas of the state, special circumstances excepted. The legislation also required that the [Office of the State Fire Marshal](#) develop and adopt a [Model Ordinance for the Defensibility of Space and Structures](#), which could be used by local authorities as an example of a typical and desirable set of pre-fire safety regulations to be adopted and enforced at the local level. Any jurisdiction which enacted (or already had) local regulations in substantial compliance with the Model Ordinance was exempted from the Class A roofing requirement, and could retain minimum Class B roof coverings throughout its jurisdiction, ostensibly since many other fire safe tactics would already have been employed there.

Due to the fact that many jurisdictions were exempted from the AB 337 mapping project for various reasons, a number of jurisdictions to which AB 3819 was meant to apply had not adopted zones as recommended by CDF per [GC 51178](#) (AB 337). Hence, the new Class A roofing requirement would not be enforced in the exempted and undesignated areas via this code. Technically, all areas with a designated VHFHSZ should comply with this model ordinance in its entirety, but compliance has been far from swift and less than total to date. Local jurisdictions can reserve the right to adopt standards equally or more stringent than those written into California law. Unfortunately, concerns regarding insurance coverage, vegetation management costs, and disposal issues have hindered progression of fire hazard zoning laws and enforcement. These issues are discussed in more detail in the other reports prepared by the [University of California Forest Products Laboratory](#) (UCFPL) for the [Federal Emergency Management Agency](#) (FEMA) and the [Office of Emergency Services](#) (OES) under the [Fire Hazard Mitigation Grants Program](#), and in other volumes in the [I-Zone Series](#).

In 1995, Assemblywoman Valerie Brown's [AB 747](#) took the roofing requirements yet one step further. This bill's passage essentially outlawed the use of wood roofing on any new structure or on a re-roof of 50% or more of the roof area of any existing structure in the entire state of California. Its built-in timeline specifies the only avenue by which a roofing manufacturer may comply with the ten-year wood shake shingle testing procedure in order to receive approval as Class A or B. This legislation may, unfortunately, place too much emphasis on the type of roof covering and too little emphasis on the roof assembly, which includes the underlying paper, plywood, and eave assemblies. Banning untreated wood shakes alone does not necessarily create fire-resistant roofing. This issue is discussed in much more detail in other reports prepared by the UCFPL, which address [structural ignition potential](#).

Assembly Member Dutra introduced new roofing regulations in February 1999 via [Assembly Bill 423](#). The bill, which became law January 1, 2000, updates fire-retardant roofing regulations as they occur throughout California. Previously, these regulations were only triggered by new construction or a repair or re-roof of at least 50% of the total roof area. This bill alters these requirements such that fire-retardant roofing regulations would be triggered by *any* repair or alteration of the roof covering, specifying that fire-retardant roofing must be used even in small repair jobs if the structure is located in a designated hazard zone. Additionally, if 50% or more of the roof covering is replaced within any one year period, AB 423 states that the *entire* roof covering must be replaced with fire-retardant materials as specified. The new law also addresses the fact that the [State Insurance Commissioner](#) must accept these regulations in connection with “replacement cost” insurance policies. The main purpose of this legislation, though, was to clarify the roofing regulations such that the “50% loophole” is removed, in order to circumvent use of non-fire-retardant roof coverings through partial re-roofs and small repairs.

For more information on roofing requirements in California, all of these regulations can be found in [Health and Safety Code §13108.5 and 13132.7](#).

3.3e. Periodic Review

“ The [CDF] director shall periodically review the areas in the state identified as very high fire hazard severity zones pursuant to this chapter, and as necessary, shall make recommendations relative to very high fire hazard severity zones. This review shall coincide with the review of state responsibility area lands every five years and, when possible, fall within the time frames for each county's general plan update. Any revision of areas included in a very high fire hazard severity zone shall be made in accordance with Sections 51178 and 51179” (GC § 51181).

This CDF responsibility for a five-year review of LRA VHFHSZ was fulfilled via a document titled [Wildland Fire Hazard Assessment](#) (1999). The review was conducted by contacting local agencies, mainly those with identified VHFHSZ, to determine what local actions had been taken to comply with or improve on the requirements of AB337 (Bates). It has been determined by CDF that any future hazard re-assessment will be conducted statewide, so as to avoid inconsistencies that result from assessments conducted by county or by jurisdiction. This review indicated that not all VHFHSZ jurisdictions have complied with the state mandates. CDF does not play an enforcement role in state mandates that are meant to apply to LRA.

3.4. Updates of Classifications and Designations

According to [GC 51179](#), a local agency has the right to accept, reject or modify the CDF VHFHSZ identification in its jurisdiction. As usual, any new recommendations would be subject to local ratification or rejection. As long as there is substantial evidence on the record to support local findings, local agencies can conduct their own hazard assessments, make their own classifications and designate hazard areas as they see fit. As a result, the role played by CDF in the LRA is merely informational. If a local agency decides to change or update the CDF recommendations, they must go through the steps outlined in [Government Code Sections 51175-51189](#), and they should notify the Board of Forestry, CDF and the public of any changes. These changes are not rebuttable by CDF or the Board, however, so such a notification is just a formality to keep state agencies informed of local actions.

Because there are so many local jurisdictions, all of whom can update and change their own VHFHSZ boundaries, it would stand to reason that an update of the original VHFHSZ maps by CDF could be considered futile.

3.5. Tools for Hazard Assessment

There are many other hazard assessment systems available and in use today. The [Department of Housing and Urban Development](#), [CDF](#), [ISO](#) and many other organizations have introduced different methods for different purposes. Below are described a few assessment systems that are comprehensive and comparatively easy to use. For detailed information on these and other hazard assessment options, please see the *Wildland Fire Hazard Assessment* publication of the *I-Zone Series*.

3.5a. Bates Bill System

As described in Section 2 of this guide, the Bates bill (AB 337) was a direct result of the great loss of homes and lives in the Tunnel Fire of 1991 in the Oakland/Berkeley Hills. CDF, given the responsibility to carry out the state mandate, formed a working group to determine how to proceed. The group, comprised of state and local representatives, decided upon a system involving fuel, topography (slope), weather, and dwelling density as the foundation for the system, and added additional mitigation factors to adjust the score upward or downward. The raters (in almost all cases one local representative and one CDF or Contract County representative) had the opportunity to adjust the score down by one point for certain mitigation measures. They also had the option of increasing the score by one point for certain factors known to contribute to fire spread. To qualify as a [Very High Fire Hazard Severity Zone](#) (VHFHSZ), an area had to score 10 or more points. Potentially, the range of scores (including the mitigating factors) could range from a low of 1 to a high of 16.

This system uses a resolution of one square mile, with three fuel classes. The rater's instructions specify that no area under 640 contiguous acres (or one square mile) should be identified as a VHFHSZ. This limits VHFHSZ to areas that show a broad pattern of hazards over a significant portion of the land, excluding "island" areas within the LRA that are hazards in and of themselves, but that are not subject to the larger wildland interface threat.

The following criteria and factors developed under AB 337 for rating fire hazards in the LRA are easy to use and were developed by CDF with this in mind. The recommended system was given an extensive field test by different members of the working group, and was then implemented. A copy of the rating form is found on the following pages.

CRITERIA

CLASSIFICATION

POINTS

A. Fuel (NFPA 299). For each zone a fuel hazard rating shall be assigned. Where fuel types vary within a zone, the rating assigned for the zone shall be that which best represents the predominant fuel type.

Type

- | | |
|--|----|
| 1. Small, light fuels (Grass, Weeds, Shrubs) | +1 |
| 2. Medium fuels (Brush, Large Shrubs, Small Trees) | +2 |
| 3. Heavy fuels (Timber, Woodland, Large Brush, or Heavy Planting of Ornamentals) | +3 |

B. Topography—Slope (NFPA 299 and FEMA). For each zone a Slope Hazard Rating shall be assigned. Where slopes vary within an area, the rating for the area shall be that which best represents the predominant slope range.

- | | |
|--|----|
| 1. Flat to mild slope (0-9.9%) | +1 |
| 2. Mild to Medium Slope (10-19.9%) | +2 |
| 3. Medium to Moderate Slope (20-39.9%) | +3 |
| 4. Moderate to Extreme Slope (40% +) | +4 |

C. Dwelling Density (1991 Census or a local ordinance with higher standards). For each zone a dwelling rating shall be assigned. A check with each area for local ordinances regarding dwelling density must be accomplished before setting this factor.

- | | |
|---|----|
| 1. Low (less than one structure per 10 acres) | +1 |
| 2. Medium (one structure per 5 to 10 acres) | +2 |
| 3. High (one structure per 0 to 5 acres) | +3 |

D. Weather (instructions for zoning fire hazard severity in State Responsibility lands in California). The ratings (EXH 1) show what each county is rated. This information is obtained for each county by using the Burning Index (BI). Weather is a major part of the BI system. The information for developing BI systems came from weather stations throughout the state.

- | | |
|--------------|----|
| 1. Moderate | +1 |
| 2. High | +2 |
| 3. Very High | +3 |

By adding the highest number for the four factors, you will have a total of 13 points. The point spread between ten (10) and thirteen (13) points represents the combination of factors needed to make up a Very High Fire Hazard Severity Zone.

Continues on next page

MITIGATION MEASURES

These mitigation measures are points, plus or minus, that a local agency may use to mitigate a rating within its area, and could cause a higher or lower rating for the benefit of the local agency.

FACTORS—MINUS**POINTS**

- | | |
|---|----|
| 1. Infrastructure—meets or exceeds minimums of ISO 8, NFPA 1231, PUC 103, or PRC 4290 | -1 |
| 2. Housing or roofing ordinances (Class A, B, or better roof), sprinklers required, firesafe construction fuel modification, local option | -1 |
| 3. PRC 4291 Ordinance or better (Natural Resource Protection) | -1 |

OTHER FACTORS—PLUS

- | | |
|---|----|
| 1. Rough topography with steep canyons or draws that would impede responding personnel and equipment. | +1 |
| 2. Area with a history of high fire occurrence, related to surrounding areas, because of heavy lightning, railroad fires, debris burning, arson, etc. | +1 |
| 3. Area subject to severe fire weather such as strong winds and lightning, and has constant seasonal weather patterns that contribute to increased fire activity. | +1 |
| 4. Heavy concentration of flammable ornamentals or vegetation introduced by humans. | +1 |

TOTAL POINTS_____

VERY HIGH FIRE HAZARD SEVERITY ZONE ? YES / NO

DESCRIPTION OF ZONE:

1. LATITUDE AND LONGITUDE_____
2. TOWNSHIP, SECTION, RANGE_____
3. NARRATIVE OF ZONE_____
- _____
- _____
- _____

DATE_____ SIGNATURE OF RATER_____

This rating system is reasonable, and could be adopted in most of California, with or without minor modifications. These might include reducing the minimum size of the area rated from 640 acres to perhaps 320 acres or even smaller, such as a subdivision. The weather component could be adjusted to reflect local conditions rather than countywide conditions, which in some cases result in coastal areas rated too high and other areas too low. The fuel types on the rating form are easy to determine using the descriptions provided. The slope percent may require some field work with an abney or other device, or one could locate a county map showing these slope classes through the USGS, one's county or local planning department, or on the CDF home page (<http://www.fire.ca.gov>). Ordinances for adoption of state mandates are found in the Appendix.

In summary, the Bates System with or without modification does work, and has the advantage of being applicable statewide. A disadvantage is that a large number of local agencies decided not to acknowledge it. This means that the actual number of Very High Fire Hazard Severity Zones should be much higher than the number identified as part of the original Bates review. If fuels, topography, and weather with these criteria could be mapped using remote sensing to assure objectivity and accuracy, this system could produce a much more effective hazard assessment. The information could then be used by local agencies, perhaps with additional criteria, to achieve hazard maps that are useful to individual jurisdictions.

3.5b. Fire Hazard Zoning Working Group System

The Working Group assigned to the Fire Hazard Zoning grant project evaluated the above and many other assessment systems and synthesized them into one system they feel can be applied most effectively throughout the state, with whatever local modifications are needed. Below are sample hazard assessment maps developed using the Working Group's system. The group was established in 1997 and was comprised of personnel from state, federal, and local agencies with varying fire protection responsibilities. The following section outlines their findings and recommendations relative to a single, adaptable system.

The GIS based fuel ranking and validation process described under the Fire Plan System is the starting point for the fire hazard zoning project coordinated by the State Fire Marshal's Office, and developed by the Working Group. The project proposes to combine the effects of fuels, topography (elevation, slope, and aspect) and weather. The current California State Fire Plan fire hazard mapping system and this system are both summarized to grid cells equaling approximately 450 acres (Q81) from the USGS topographical maps. Each Q81 is limited to one fuel model, whichever is most prevalent. This helps to ensure that the final map will be a manageable, cohesive product that can give an accurate picture of significant fire hazard patterns throughout the state, rather than just a detailed representation of fuel model existence. A product such as this, showing broad patterns along with moderate detail in mixed areas, can be a useful planning tool for fire prevention and protection agencies trying to allocate resources and enforce mitigation standards.

The following bullet points summarize the proposed process.

- An “Elevation Component” is developed in the GIS where a relative intensity score is assigned to each of six elevation classes. This component is designed to reflect the fact that similar fuels in higher elevations will generally burn with less intensity than those same fuels at lower elevations.

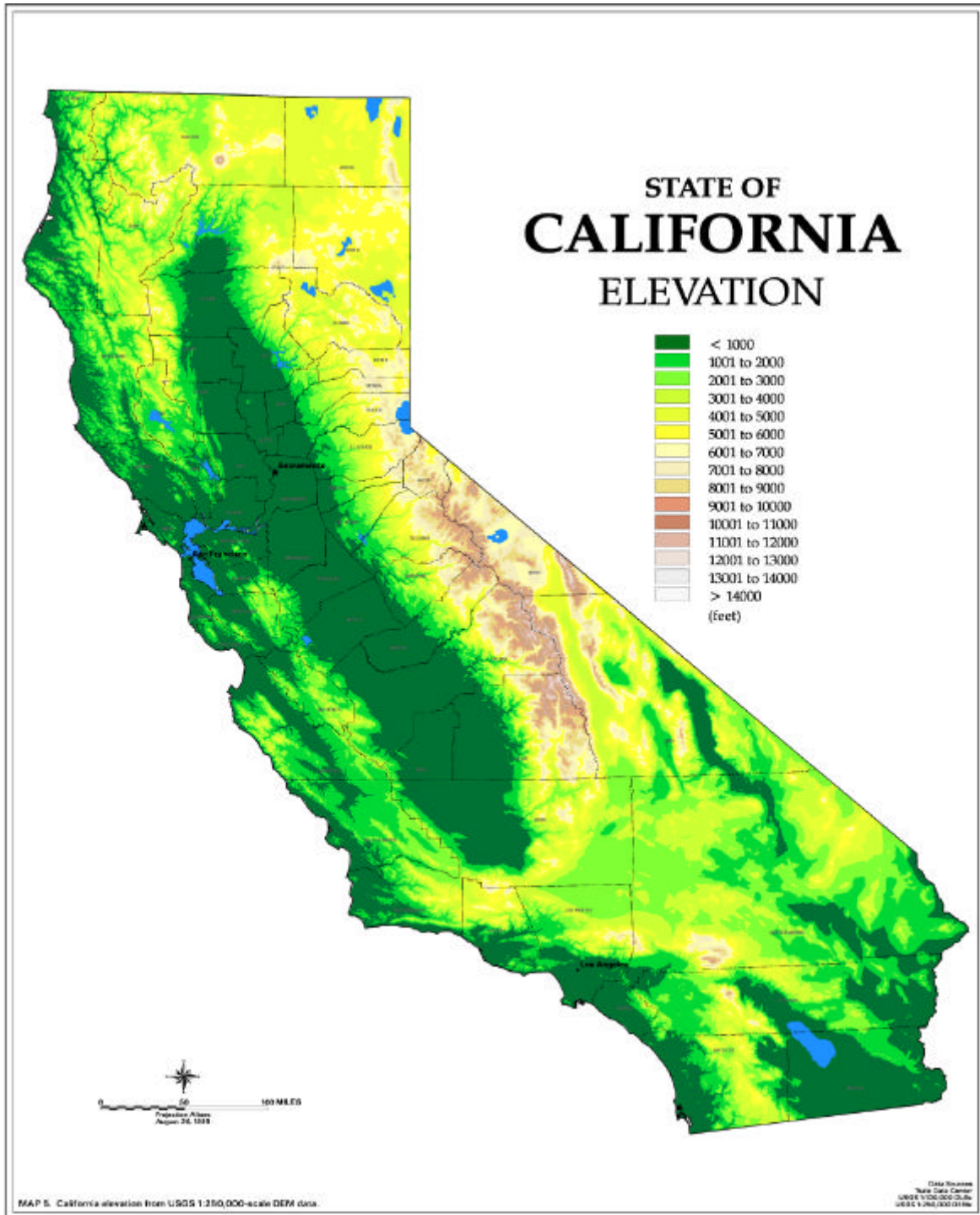


Figure 3.15 – Working Group Elevation Map

- Secondly, an “Aspect Component” is developed reflecting the differing burning characteristics attributed to aspect. For example, the south slope usually burns with more intensity than north slopes due to the increased exposure of fuels to daytime radiant heating. Relative scores are assigned to each aspect.

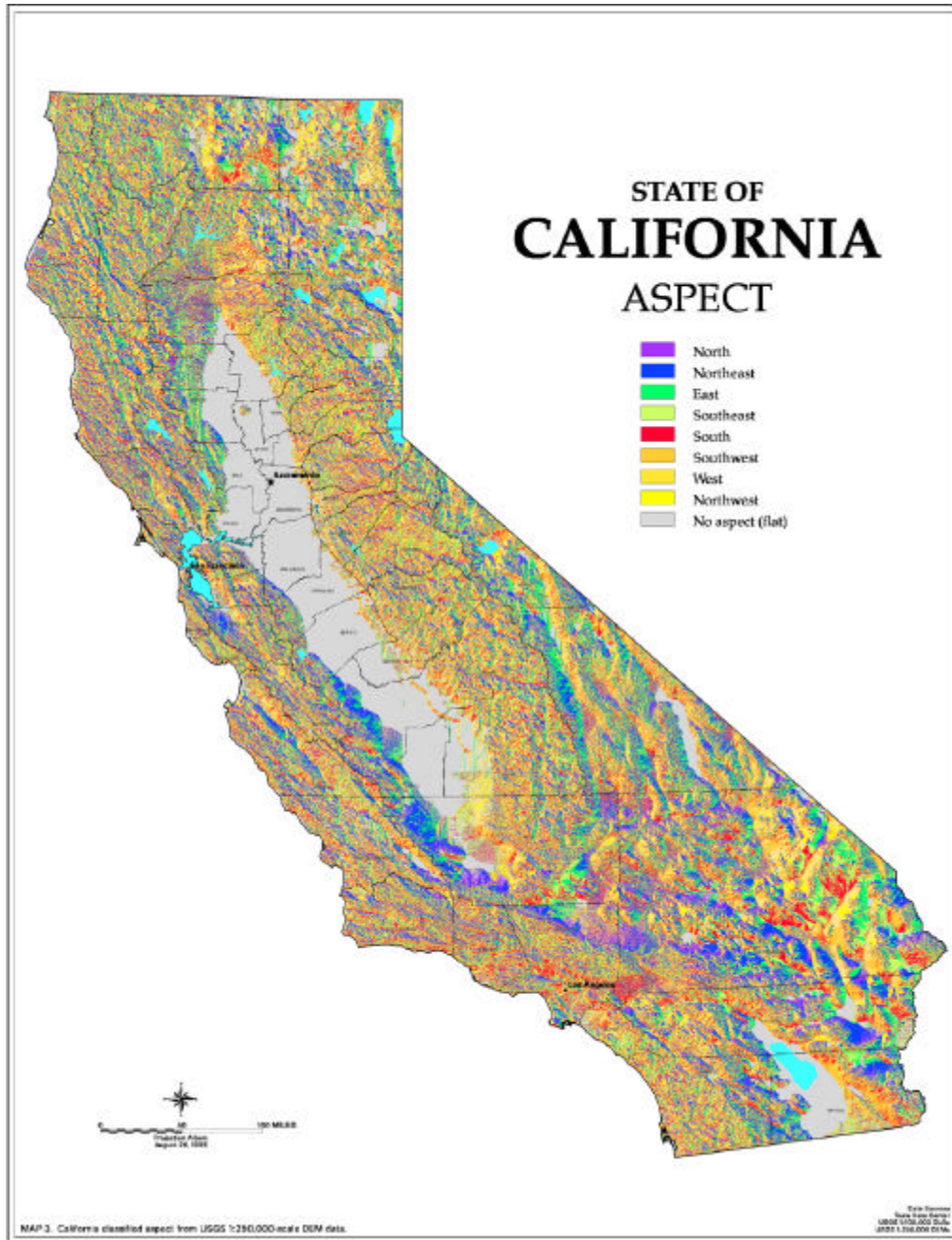


Figure 3.16 – Working Group Aspect Map

- Slope is the third component developed in the GIS used to evaluate burning intensity. As slope increases, a fire's rate of spread and intensity will increase. Each slope class is given a score to reflect its relative intensity.

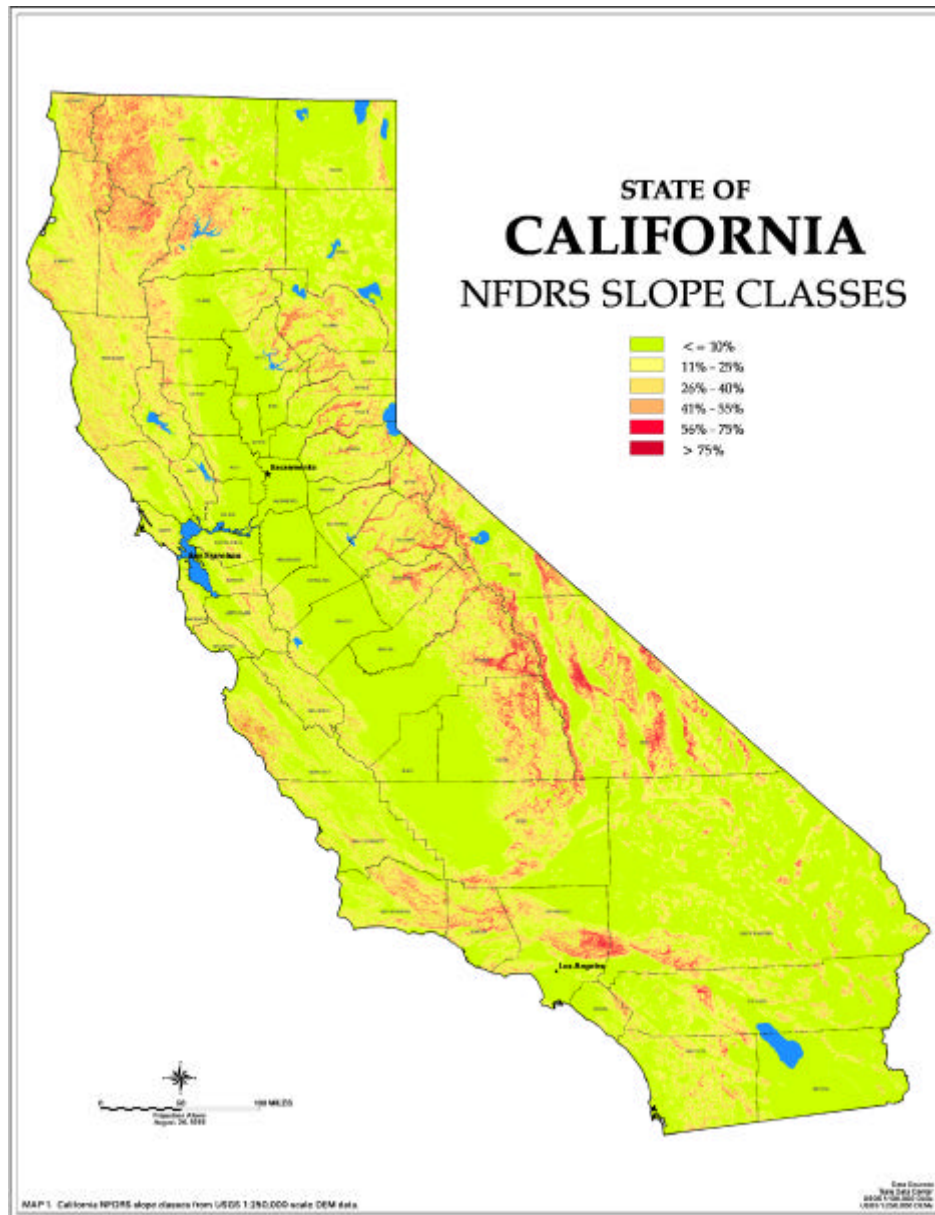


Figure 3.17 – Working Group Slope Map

- Finally, a frequency of severe weather rating based on the number of severe weather days reflected by hourly weather data collected at RAWS (Remote Automated Weather Stations) for each area is calculated

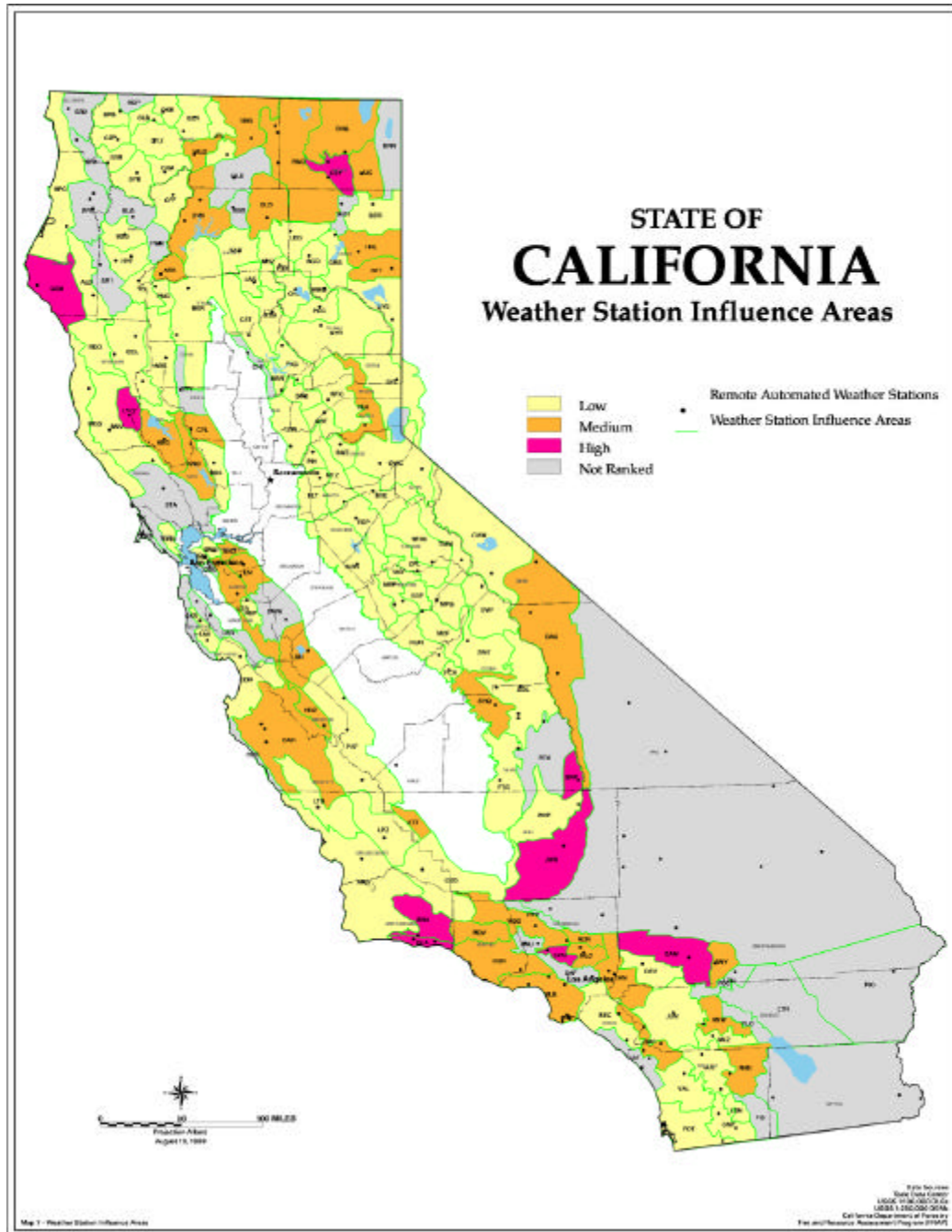


Figure 3.18 – Working Group RAWS/Weather Score Map

The above-described ranked values for elevation, aspect, slope, and severe weather frequency are averaged, resulting in each Q81 receiving a final “Weather Score”. This score reflects expected relative burning intensities based on weather related topographic features.

The “Severe Fire Weather” score is then combined with the “Fuel Hazard Assessment” to create the final “Fire Hazard” matrix. The “Fire Hazard” matrix is then ranked and each Q81 cell is assigned a value of 1, 2, or 3. These numbers reflect the respective fire hazard of Moderate, High, or Very High. The final output of the process is a map showing the relative fire hazard at a scale of 450 acres

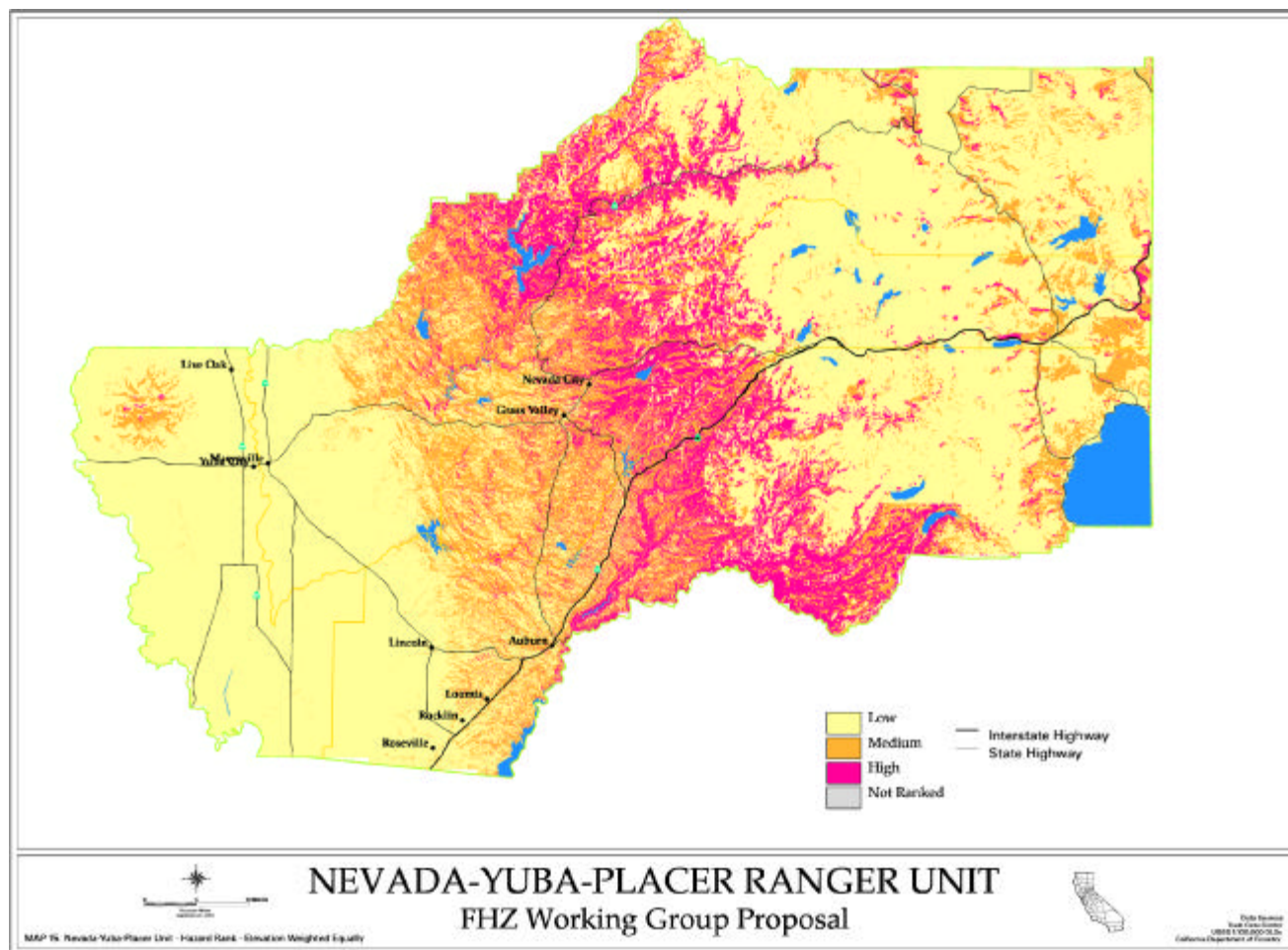


Figure 3.19 –Working Group Fire Hazard Severity Map

The process summarized above combines the best available GIS data sources with [California Fire Plan](#) methodologies, including the use of local Ranger Unit personnel and local stakeholders to validate data. This statewide computer-based process minimizes differing interpretations of data and insures the continuity, consistency, accuracy, and usefulness of the Fire Hazard Map.

Comments received on the draft that follows focused mainly on whether elevation should be given equal rating with the aspect and slope components. Everyone agreed that it should have a lower rating than the other elements. A test map has been produced to see what the different elevation rating might do to the results. This map is shown on the following page.

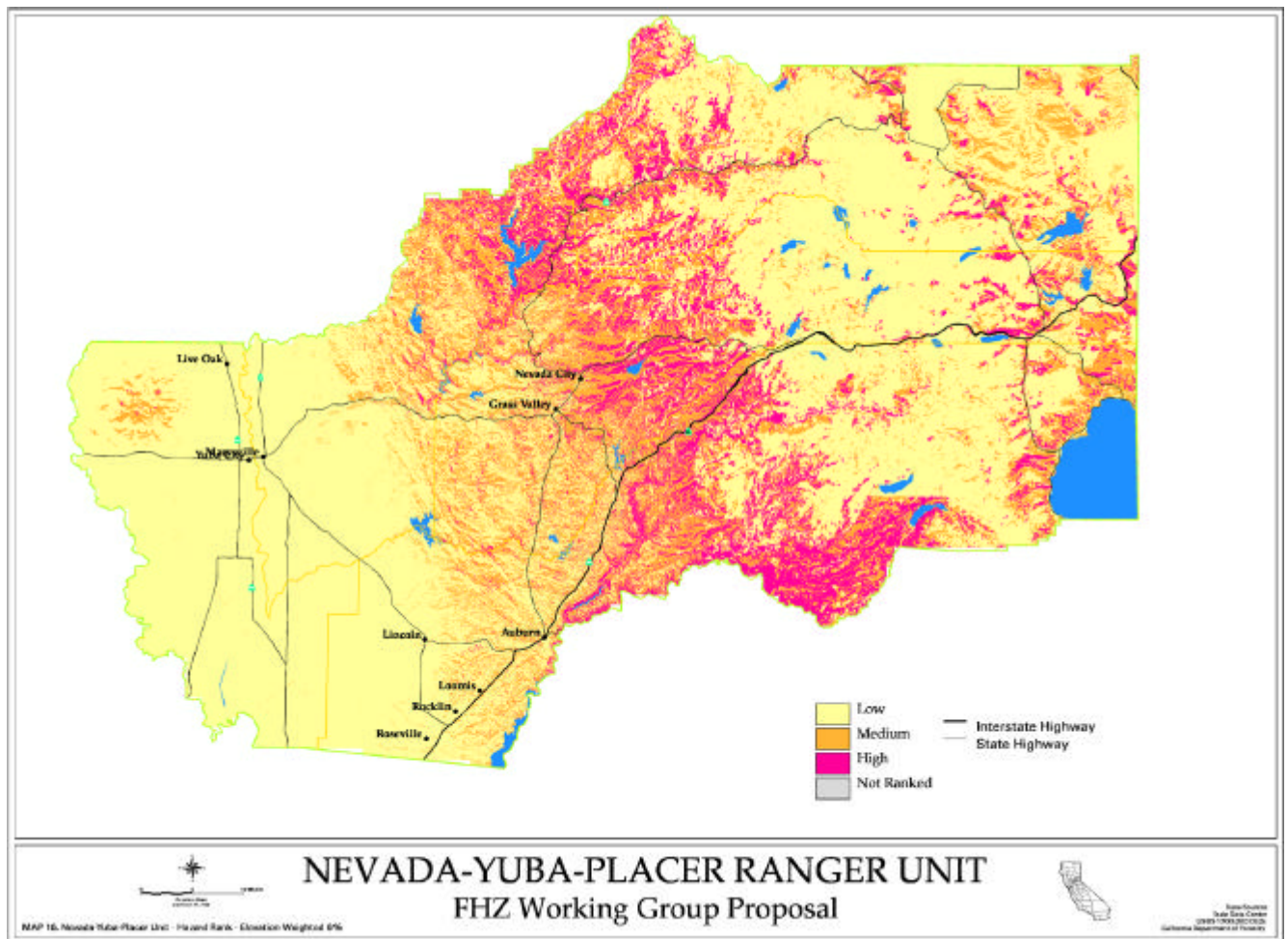


Figure 3.20 – Working Group Fire Hazard Severity Map (Elevation Weighted 6%)

The change in elevation weighting has affected the hazard map. Over the large pink area, the 6% weighted elevation component has produced a more refined depiction of the hazards present. Whether or not this refinement is relevant to the overall hazard assessment would be best decided by the local officials using the map, depending on its various purposes. It does seem, however, that the lower weighted elevation will more accurately reflect the other hazards (topography, aspect, fuels and weather), since a fully weighted elevation component might result in a high fire hazard assessment for areas of high elevation that might otherwise qualify as low or moderate fire hazards.

For more detailed information about the Fire Hazard Zoning Working Group's fire hazard assessment system, see Chapter IV of [Wildland Fire Hazard Assessment](#).

3.5c. Brian Barrette's System for Rating Structural Vulnerability

While the CDF is not charged or mandated to provide structural protection, some of the fastest growing areas in California are protected by CDF, and providing structural protection often becomes the first priority when a wildfire occurs. Local units have usually developed own ratings for areas, and some have at least mentally decided whether a particular house, group of houses, or subdivision is defensible. The Bates system of rating LRA is one option for rating a particular area. Another option is to use the following system, which was developed by Brian Barrette, who was also a major contributor to the work done under the Bates bill, which is described elsewhere in this guide.

The system takes into account the three standard rating factors of fuel, weather, and topography by starting with the SRA fire hazard severity rating as determined using the SRA hazard assessment system described earlier in this chapter. This system further focuses on individual structures by also rating factors such as roofing, siding, vegetation clearance, roads and signage, chimneys, structural accessories, water supply, and the location of the structure in relation to the surrounding conditions. Intended for use in assessing survivability of structures on individual parcels, this system uses factors most known to affect structural ignition and loss. The system could also be used in conjunction with larger-scale assessments, or could be based on a base hazard rating achieved through a separate assessment system. The system is as follows:

	Points
1. SRA FIRE HAZARD RATING	
Very High	6
High	4
Medium	2
2. ROOFING COMPOSITION	
Untreated Wood	3
Treated Wood	2
Composition or Other Fire Resistant Material	1
3. SIDING	
Wood	3
Combination	2
Stucco/Brick	1
4. VEGETATION CLEARANCE	
Less than 30 feet; tree limbs closer than 10 feet to roof; dead branches near roof; leaves on roof	3
Two or three of above present	2
Meets all Firesafe Standards	1
5. ROADS AND SIGNAGE	
Steep; narrow; poorly signed	3
One or two of the above	2
Meets all requirements	1
6. CHIMNEYS	
No Screen	3
Screened	2
No Chimney	1

- | | | |
|----|---|---|
| 7. | OTHER ITEMS | |
| | Wooden deck; stacked firewood nearby; propane tank close by | 3 |
| | One or two of the above | 2 |
| | None of the above | 1 |
| 8. | WATER SUPPLY | |
| | None, except domestic | 3 |
| | Hydrant, tank, or pool over 500 feet away | 2 |
| | Hydrant, tank, or pool within 500 feet | 1 |
| 9. | LOCATION OF STRUCTURE | |
| | At top of steep slope with brush or grass below | 3 |
| | Mid-slope with clearance | 2 |
| | Level with lawn, or watered groundcover | 1 |

VULNERABILITY RATING

VERY VULNERABLE	21-30 Points
VULNERABLE	16-20 Points
NOT VULNERABLE	10-15 Points

This is a system for rating the vulnerability of a structure in the event of an approaching wildfire. This system is not necessarily intended for use in mapping and does not address resolution. It can be used by individual homeowners with little to no knowledge of fire science, fire behavior, or building standards in order to determine whether their property is a good candidate for a fire hazard mitigation plan. This system is meant to be an "add on" system attached to SRA, Fire Plan, or other assessment systems that do not include structures and their vicinities as part of the base line criteria. It should be tested in SRA to see if it would be of value before actual adoption. This system can help the lay property owner perform a self-evaluation of his or her property and perhaps the surrounding properties as well. However, this system is only for determining immediate threats to a structure and not to an entire subdivision or region.

3.6. Hazard Assessment After the Fact

As stated above, local agencies can conduct their own hazard assessment projects if they see a need. The *Wildland Fire Hazard Assessment* (CDF 1999) analyzed various fire hazard assessment systems used in California and other states. Even though local agencies can conduct their own reviews, the most consistent hazard assessment project is one that ignores jurisdictional boundaries and identifies hazards regardless of where they are located. This would result in a more accurate statewide hazard assessment that could then be considered by all local agencies equally. However, the problem still remains that many local jurisdictions resist further action. In any case, political hurdles and sentiments still affect local fire hazard zoning.

4. NATURAL HAZARD DISCLOSURE FOR WILDFIRE

Natural Hazard Disclosure (NHD) for wildfire is a type of regulation that has resulted directly from fire losses in the Urban/Wildland Interface. It requires sellers of real property in [VHFHSZ](#) (LRA) and [Wildland Fire Areas](#) (SRA) to disclose to potential buyers that certain hazards exist in the area, and that the buyer may be subject to local laws requiring such things as vegetative clearance around structures and fire-retardant roofing. Buyers should be aware of these facts before purchasing property, resulting in this disclosure requirement. These regulations were first passed in the SRA (1989), then later in the LRA (1998). Since then the requirements have been synthesized (1999), and references to NHD for wildfire and other hazards can be found in the Public Resources Code, the Government Code and the Civil Code.

4.1. Wildland Fire Areas

Assembly Bill 1812 (Cortese) required Natural Hazard Disclosure for wildfire hazards in State Responsibility Areas (SRA) areas. This law was enacted in 1989, affecting [PRC Section 4136](#). It was proposed as a response to the destruction of 873 structures in wildfire conflagrations that year. Because Natural Hazard Disclosure had already been required for such hazards as earthquake fault zones and seismic hazards, the inclusion of wildfire in these regulations was a logical step in the disclosure process between buyers and sellers of real property. As specified on the official NHD form, this disclosure notifies a potential buyer of real property that the property is located in a wildland area subject to significant wildfire hazards. It further discloses when CDF has responsibility for fire protection.

This information must be disclosed for several reasons. One reason is that CDF's primary goal is natural resource protection. Also, many CDF fire stations are staffed only seasonally. This means that during certain times of the year first response will come from an alternate station farther away. Another reason is that a potential buyer must be notified that they are subject to the vegetation and structural maintenance requirements of [PRC 4291](#), such as creating 30-foot clearance around structures and installing screens on chimneys.

4.2. Very High Fire Hazard Severity Zones

Directly related to fire hazard assessment and zoning in the LRA is the passage of Assemblyman Torlakson's [Bill 1195](#) in 1998. This bill required Natural Hazard Disclosure (NHD) in LRA areas designated as a VHFHSZ mandated by the Bates Bill pursuant to [Government Code 51178](#). This requirement was "piggy-backed" onto the existing NHD requirements for SRA wildlands, earthquake, and flood hazards. The original bill for this purpose was titled AB 6X, which progressed through the Assembly with such ease that no member voted against it. Its implementation was delayed, however, until the passage of the similar AB 1195, which repealed [AB 6X](#). The effective date of the AB 1195 regulations was June 1, 1998. As a result of this legislation, the [Office of the State Fire Marshal and Teale Data Center](#) posted Natural Hazard Disclosure maps on the Internet in digital and picture formats, retrievable from various links such as www.ceres.ca.gov/planning/nhd.

A particular area of confusion has developed with the emergence of private sector industry firms that sell disclosures and maps. No express quality assurance (other than errors and omissions insurance and required engineering qualifications) exists for these firms, sometimes resulting in inaccurate disclosure information being disseminated. The CDF and Teale Data Center have publicized the original VHFHSZ identification maps as integrated with the SRA wildland maps for the sole purpose of providing NHD information to individuals who want information prior to sale, or who have been unable to locate maps

elsewhere. However, the LRA portion of these maps has always been subject to adoption or rejection by local agencies, so any firm that uses the CDF/Teale version of the maps for LRA NHD, without contacting the local agency to verify the boundaries, is likely to provide outdated or inaccurate information to its customers. Some of these companies are also still unaware that an SRA boundary update occurred in June of 1999. In addition, with the passage of [Assembly Bill 248](#) in September of 1999, which updates NHD requirements, even more information is now subject to error. These concerns should be addressed if the disclosure industry wishes to maintain compliance with state laws, and to provide their customers with accurate information.

Consequently, it is clear that although progress is being made in the arena of fire hazard zoning and code adoption and related safety measures, much remains to be done. Local implementation of these standards is increasing, but fully compliant jurisdictions are still in the minority. Cleanup legislation and new strategies for fire hazard assessment and zoning should be drafted, along with recommendations for funding and staffing the required local programs.

California is a wildfire culture, whether we like it or not. In order to adapt to our surroundings, we must take precautions and make [long-term plans](#) to reduce the risks we face in such an environment. No matter what Californians do, wildland fires will continue to happen. However, unlike other natural disasters, some wildfires are preventable. The question is, do we Californians have what it takes to save ourselves and our homes from this living threat? We have the tools: engineering, enforcement and education. Now let's use them together.

Appendix A

BIBLIOGRAPHY

* *California Fire Plan*, California Board of Forestry. http://frap.cdf.ca.gov/fire_plan/.

Harrell, R.D., "Fire Hazard Assessment," Introduction, page 1, April 1998.

* *I-Zone Series*, UC Forest Products Laboratory. <http://www.prefire.ucfpl.ucop.edu/izone.htm>.

* *Wildland Fire Hazard Assessment*: Final Report for FEMA HMGP 1005-47. CDF and UC Forest Products Laboratory, in cooperation with FEMA and OES. October, 1999.
<http://www.prefire.ucfpl.ucop.edu/izhazard.htm>.

* **Hyper-linked document**

Appendix B

GLOSSARY OF TERMS

Accessory Building: Any building used as an accessory to residential, commercial, recreational, industrial, or educational purposes as defined in the latest adopted edition of the California Building Code, Group U, Division I, Occupancy that requires a building permit.

Agriculture: Land used for agricultural purposes as defined in a local jurisdiction's zoning ordinance.

Building: Any structure used or intended for supporting or sheltering any use or occupancy that is defined in the California Building Code, 1994 Amendments, Chapter 2.

CDF: California Department of Forestry and Fire Protection.

CEQA: California Environmental Quality Act.

Classic Interface: A well-defined boundary. In California this interface type exists at the perimeter of well-developed urban areas. The traditional interface, for example, implies some kind of boundary of defined perimeter that can be defended along some kind of front. And once the front is defended, the fire becomes clearly structural in character, or clearly wildland.

Clearance: Space cleared of vegetation as required by law, regulation, easement, etc., for the purpose of preventing fires.

Code Enforcement: Application of specific codes based on statutory mandated conducted through inspection.

Contract Counties: In California, the six counties that provide fire-prevention services in state responsibility areas under contract with the state. These counties are Marin, Kern, Santa Barbara, Ventura, Los Angeles and Orange.

Damage Assessment (Fire Suppression): Amount of economic loss.

Damage Evaluation (Fire Prevention Engineering): The impact and effect of statutes and regulations on structures and other improvements relating to engineering, education, and enforcement.

Dead-End Road: A road that has only one point of vehicular ingress/egress, including cul-de-sacs and looped roads.

Defensible Space: An area either natural or manmade where material capable of causing a fire to spread unchecked has been treated, cleared, reduced or changed in order to act as barrier between the advancing wildfire and the loss to life, property or resources. This concept is vital for firefighter safety and provides the single significant element of protection of individual property owners.

Defensible Space: The area within the perimeter of a parcel, development, neighborhood or community where basic wildland fire protection practices and measures are implemented, providing the key point of defense from an approaching wildfire or defense against encroaching wildfires or escaping structure fires.

The perimeter as used in this regulation is the area encompassing the parcel or parcels proposed for construction and/or development, excluding the physical structure itself. The establishment and maintenance of emergency vehicle access, emergency water reserves, street names and building identification, and fuel modification measures characterize the area.

Defensible Space: Adequate space (free from flammable vegetation) between structures and flammable vegetation, which allows firefighters a safe working area within which to attack an oncoming wildfire.

Development: The uses to which the land, which is the subject of a map, shall be put, the buildings to be constructed on it, and all alterations of the land and construction incident thereto (GC 66418.1).

Director: Director of the Department of Forestry and Fire Protection or his/her designee.

Driveway: A vehicular access that serves no more than two buildings, with no more than three dwelling units on a single parcel, and any number of accessory buildings.

Duff: Partially decayed leaves, needles, grass or other organic material accumulated on the ground.

Dwelling Unit: Any building or portion thereof which contains living facilities, including provisions for sleeping, eating, cooking and/or sanitation for not more than one family.

Easement: A right afforded a person to make limited use of another's real property.

Exception: An alternative to the specified standard requested by the applicant that may be necessary due to health, safety, environmental conditions, physical site limitations or other limiting conditions such as recorded historical sites, that provides mitigation of the problem.

Exempt: Does not require clearance of flammable vegetation.

Firebreak: Any natural or constructed barrier utilized to segregate, stop and control the spread of fire or to provide a control line from which to work.

Fire Hazard: Dangerous accumulation of flammable fuels in wildland areas usually referring to vegetation.

Fire Hazard: The flammable materials that may be ignited by the various fire risks or cause fires to increase in intensity or rate of spread.

Fire Hazard Assessment: A tactical, site specific measurement of the factors which affect fire behavior, fire suppression capability and effectiveness, structure survivability in a wildfire situation, firefighter and resident safety, etc. (Harrell).

Fire Hazard Classification: A broad, strategic analysis which, while using many of the assessment parameters, focuses more on a matrix of fuels, slope and weather (The Fire Environment), which pose a conflagration potential influenced by fuelbed continuity, access, open space, proximity to other hazardous areas, etc. "Fire Hazard Classification" is an integral part of the State Fire Plan (Harrell).

Fire Hazard Mitigation: Various methods by which existing fire hazards can be reduced in a certain area, such as fuel breaks, non-combustible roofing, chimney screens, etc.

Fire Hazard Zoning: A planning and regulatory activity (typically conducted by a local agency such as a city or county) which provides criteria for what kinds, how many and under what conditions development or other activities should be regulated in areas of various hazard classification (Harrell).

Fire Risk: A source of ignition of fire hazards.

Fire Season: That portion of the year, generally 6 to 8 months in the summer and fall in California, declared such by the responsible public agency fire administrator. Declaration is based on fuel and weather conditions conducive to the ignition and spread of wildland fires.

Flammable: Combustible and capable of being easily set on fire or kindled.

Fire: The rapid oxidation of a fuel resulting in the release of heat, light and other byproducts.

Fire Information: The distribution of information to the media on ongoing fires.

Fire Plan: The business process used to define values at risk, focus efforts to mitigate potential losses; a framework for minimizing losses.

Fire Prevention: The practices used to keep the combination of heat, fuel and oxidizer from continuing to threaten life or property.

Fire Prevention Education: The development and distribution of policy, practices and publication procedures to targeted user groups in order for them to take appropriate action through behavior modification.

Fire Prevention Enforcement: The actions taken by the Authority Having Jurisdiction (AHJ) to assure that acts, omissions or specific environment requirements set forth in statutes or regulations are adhered to by those being held responsible.

Fire (Prevention) Engineering: The discipline of using the principles of fire behavior and its effects on life or materials to create appropriate controls on the use of fire, or to resist its ignition and spread.

Fire Prevention Planning: Codes and Standards; Data Collection; Grants; Education; Land Use Planning; and Licensing, Listing, and Certification.

Fire Prevention Planning: Ignition management to reduce large loss and damage.

Fire Prevention Program: The use of fire engineering, education and enforcement principles to support the practices to reduce the probability of consequence from unwanted fires.

Fire Prevention Research: Examination of specific topics and data that have not been evaluated thoroughly, in order to prescribe future engineering, education or enforcement needs.

Fire Protection: The policies, practices and procedures used to limit fire losses in specific targeted areas: use of all alternatives to minimize losses.

Fire Protection Planning: Development of the infrastructure to respond effectively once a fire occurs.

Fire Safe: Environment created in and around a building to resist the intrusion of fire.

Fire Safe Engineering: The use of fire prevention engineering practices to reduce fuels, create access and reduce potential of ignition.

Fuelbreak: Strip from which forest fuels and woody vegetation have been reduced by thinning, pruning or removal well ahead of time to slow down or stop a wildfire or to provide a control line from which to work.

Fuel Modification Area: An area where the volume of flammable vegetation has been reduced, providing reduced fire intensity and duration.

Greenbelts: A facility or land use designed for a use other than fire protection, which will slow or resist the spread of a wildfire. Includes parking lots, irrigated or landscaped areas, golf courses, parks, playgrounds, and maintained vineyards, orchards or annual crops that do not cure in the field.

Hammerhead/T: A roadway that provides a “T” shaped, three-point turnaround space for emergency equipment, being no narrower than the road that serves it.

Hazard: The resistance to control once a wildfire starts – fuels, topographic features, and weather conditions – adversely affecting suppression efforts are hazard factors.

Ignition Management: Includes fire prevention program activities that are aimed at preventing the ignition of wildland fires and/or reducing damage from fires. Components include law enforcement, public education, engineering, fuels modification, and fire-safe planning.

Ignition Management Analysis and Planning Process: A formal process of analyzing and prioritizing ignitions which identifies those ignitions that are most likely to become large and/or damaging fires.

Initial Attack: The wildfire control efforts taken by resources that are first to arrive at a wildfire.

Interface, or Wildland Interface: The geographical meeting point of two diverse systems, wildland and structures. At this interface, structures and vegetation are sufficiently close that a wildland fire could spread to structures or a structure fire ignites vegetation.

Intermix/Interface: The scattering or intermixing of structures with natural vegetation. In this type of interface, there are no clearly defined boundaries.

Intermix, or Wildland Intermix: Interspersing of developed land with wildland, where there are no easily discernible boundaries between the two systems. An example would be what real estate brochures describe as “ranchettes” or “weekend farmer” homes. Poses more problems in wildland fire management than *interface*.

I-Zone: Casual reference to wildland interface and/or intermix.

Law Enforcement: Action taken to hold accountable those who do not comply with codes/laws (civil/criminal actions).

Local Jurisdiction: Any county, city/county agency or department, or any locally authorized district that issues or approves building permits, use permits, tentative maps or tentative parcel maps, or has authority to regulate development and construction activity.

National Fire Danger Rating System: A scientifically developed system for estimating degree of fire hazard, risk and burning intensity expressed numerically for broad areas.

Non-Exempt: Requires clearance of flammable vegetation.

Occluded Wildland: Where isolated islands of wildlands are surrounded by primarily urban development. The urban and wildland areas are generally clearly separated, meeting at a well-defined boundary or interface. These occluded wildlands may be many miles from continuous stretches of wildland.

Occupancy: The purpose of which a building, or part thereof, is used or intended to be used.

Post-Fire Management: Damage Evaluation, Damage Assessment and Recovery.

Pre Fire: Actions taken prior to the ignition of a fire to affect the fire's behavior or impact.

PreFire Management: The comprehensive application of safety, fire prevention, and fire hazard reduction techniques aimed to prevent the ignition of wildland fires, prevent the damage fires can cause, reduce the costs of suppressing the fires and improving forest health.

PreFire Planning: Efforts to identify specifics where actions should be taken to have the most effect on potential fires.

Prescribed Burning: Controlled application of fire to wildland fuels, in either their natural or modified state, under conditions of weather, fuel moisture, soil moisture, etc., as to allow the fire to be confined to a predetermined area and at the same time to produce results to meet planned objectives of land management.

Pre-suppression: Activities undertaken in advance of fire occurrence to help ensure more efficient fire suppression. It includes over-all planning, recruitment and training of fire personnel, procurement and maintenance of fire fighting equipment and supplies, and creating maintaining, and improving a system of fuel-breaks, roads, water sources, and control lines.

Prevention Prescription: A list of activities developed to solve an identified problem or need. A prescription will include: 1) what will be done, 2) when it will be done, 3) where it will be done, 4) who will do it, and 5) the estimated cost. Prescriptions will normally be associated only with targeted fire prevention activities.

Public Education: The distribution of information to influence the behavior of the general public.

Public Information: Distribution of information regarding ongoing department activities and proclamation, advisories and education messages.

Quad 81st Grid: This is a 7-1/2 minute quadrangles overlay grid system to facilitate the Fire Environmental Assessment process. 9 columns and 9 rows divide the 7-1/2 minute quadrangles. The resultant cells are approximately 450 acres in size. Grid cell size gives adequate level of resolution for setting unit and statewide priorities.

Ranger Unit: Administrative unit of the CDF.

Red Flag Fire Alert: A warning system for notification of the public and industry that extreme fire conditions are eminent or in effect.

Right-of- Way: The strip of land of varying width on which the tracks and other operating installations are placed and over which the operating company has some degree of control, by either deed, easement or special use permit.

Right-of- Way: The right to pass over property owned by another party. The path or thoroughfare on which such passage is made.

Risk: The likelihood of a wildfire ignition. This is normally a result of the activities of people.

Risk-Fire: Potential for ignition of fuels or an ignition agent.

Roadway: Any surface designed, improved, or ordinarily used for vehicle travel.

Roadway Structures: Bridges, culverts, and other appurtenant structures that supplement the roadway bed or shoulders.

Rural-Wildland Intermix: Where rural development and the wildland meet and intermix with no clearly defined separation or interface. The foothill and mountain developments in central and northern California are good examples. This may include small communities or rural sprawl around a community.

Same Practical Effect: An exception or alternative with the capability of applying accepted wildland fire suppression strategies and tactics, and provisions for firefighter safety, including: a) access for emergency wildland fire equipment; b) safe civilian evacuation; c) signing that avoids delays in emergency equipment response; d) available and accessible water to effectively attack wildfire or defend a structure from wildfire; and e) fuel modification sufficient for civilian and firefighter safety.

Spark Arrester: A device that traps or pulverized exhaust carbon particles to a size below 0.023 inch in diameter, as they are expelled from an exhaust system. A spark arrester system includes the following components: Internal, combustion engine, internal parts, external parts (bumper spikes, wrap-around handle bar, chain brakes, covers, muffler, and spark arrester).

Stakeholder: Any person, agency or organization with a particular interest – a stake – in fire safety and protection of assets from wildland fires.

State Board of Forestry (SBF): A nine-member board appointed by the Governor, which is responsible for developing the general forest policy of the State, for determining the guidance policies of the Department of Forestry and Fire Protection, and for representing the State's interest in federal land in California.

State Responsibility Area (SRA): Areas of the State in which the financial responsibility of preventing and suppressing fires has been determined by the State Board of Forestry pursuant to PRC 4125, to be primarily the responsibility of the State (PRC 4102).

Structure: That which is built or constructed, an edifice or building of any kind, or any piece of work artificially built up or composed of parts joined together in some definite manner.

Turnaround: A roadway, unobstructed by parking, which allows for a safe opposite change of direction for emergency equipment. Design of such area may be a hammerhead/T or terminus bulb.

Turnouts: A widening in a roadway to allow vehicles to pass.

Uncontrolled Fire: Any fire that threatens to destroy life, property or natural resources, and either is not burning within the confines of firebreaks, or is burning with such intensity that it cannot be readily extinguished with ordinary tools commonly available.

Understory: Small trees (seedlings, saplings, pole-sized) growing under a canopy of large, more or less mature trees.

Urban-Wildland Interface: Refers to the geographical point where flammable vegetation meets man-made structures.

Value: The values at risk - what can be destroyed by a wildland fire. Value includes market (quantifiable) values and non-market values such as rare and endangered species, visual aspects, etc. Timber resource losses and potential improvement losses should be considered as market values.

Vertical Clearance: The minimum specified height of a bridge or overhead projection above the roadway.

Wildfire: As defined in Public Resources Code Sections 4103 and 4104.

Wildland: Uncultivated land, other than fallow, neglected or maintained for such purposes as wood or range-forage production, wildlife, recreation, protective watershed cover or wilderness.

Wildland Fire: Any fire occurring on undeveloped land.

Appendix C

OPINION NO. 92-807--MARCH 17, 1993

Requested by: COUNTY COUNSEL, COUNTY OF AMADOR
Opinion by: DANIEL E. LUNGREN, Attorney General
Gregory L. Gonot, Deputy

THE HONORABLE JOHN F. HAHN, COUNTY COUNSEL, COUNTY OF AMADOR, has requested an opinion on the following question:

Do the fire safety standards adopted by the Board of Forestry for development on state responsibility area lands apply to the perimeters and access to buildings constructed after January 1, 1991, on parcels created by parcel or tentative maps approved prior to January 1, 1991?

CONCLUSION

The fire safety standards adopted by the Board of Forestry for development on state responsibility area lands apply to the perimeters and access to buildings constructed after January 1, 1991, on parcels created by parcel or tentative maps approved prior to January 1, 1991, to the extent that conditions relating to the perimeters and access to the buildings were not imposed as part of the approval of the parcel or tentative maps.

ANALYSIS

By legislation enacted in 1987 (Stats. 1987, ch. 955, § 2), the State Board of Forestry ('Board') was directed to adopt minimum fire safety standards for state responsibility area lands¹ under the authority of the Department of Forestry and Fire Protection. Public Resources Code section 4290² states:

The board shall adopt regulations implementing minimum fire safety standards related to defensible space which are applicable to state responsibility area lands under the authority of the department. These regulations apply to the perimeters and access to all residential, commercial, and industrial building construction within state responsibility areas approved after January 1, 1991.

The board may not adopt building standards, as defined in Section 18909 of the Health and Safety Code, under the authority of this section. As an integral part of fire safety standards, the State Fire Marshal has the authority to adopt regulations for roof coverings and openings into the attic areas of buildings specified in Section 13108.5 of the Health and Safety Code. The regulations apply to the placement of mobile homes as defined by National Fire Protection Association standards. *These regulations do not apply where an application for a building permit was filed prior to January 1, 1991, or to parcel or tentative maps or other developments approved prior to January 1, 1991, if the final map*

¹On state responsibility area lands (see Pub. Resources Code, §§ 4126-4127; Cal. Code Regs. tit. 14, §§1220-1220.5), the financial responsibility of preventing and suppressing fires is primarily the responsibility of the state, as opposed to local or federal agencies. (Pub. Resources Code, § 4125.)

²All references hereafter to the Public Resources Code prior to footnote 8 are by section number only.

for the tentative map is approved within the time prescribed by the local ordinance. The regulations shall include all of the following:

- "(1) Road standards for fire equipment access.
 - "(2) Standards for signs identifying streets, roads, and buildings.
 - "(3) Minimum private water supply reserves for emergency fire use.
 - "(4) Fuel breaks and greenbelts.
 - "(b) These regulations do not supersede local regulations which equal or exceed minimum regulations adopted by the state."
- (Emphasis added.)

As indicated in the statute, the Board's regulations are to help create "defensible space"³ for the protection of state responsibility areas against wildfires.

Originally the regulations were to be applicable with respect to all building construction approved after July 1, 1989, but by subsequent legislation (Stats. 1989, ch. 60, § 1), the threshold date was changed to January 1, 1991. The regulations (Cal. Code Regs., tit. 14, §§ 127-1276.03)⁴ in fact became operative on May 30, 1991.

A "grandfather clause" in the underlying statute provides that "[t]hese regulations do not apply where an application for a building permit was filed prior to January 1, 1991, or to parcel or tentative maps or other developments approved prior to January 1, 1991, if the final map for the tentative map is approved within the time prescribed by the local ordinance." (§ 4290.) We are asked to determine whether the regulations apply to an application for a building permit filed *after* January 1, 1991, for a dwelling to be built on a parcel lawfully created by a parcel map or tentative map approved *prior* to January 1, 1991.

We begin by noting that the grandfather clause contains two ostensibly independent exceptions to the application of the regulations. One is directed at building permits and the other at subdivision maps.⁵ These exceptions were apparently designed by the Legislature to exempt construction and development activity already in the "pipeline" as of January 1, 1991. According to Regulation 1270.01, it is the "*future* design and construction of structures, subdivisions and development" (emphasis added) which is to trigger application of the regulations.

Thus, although an application for a building permit is not made until after January 1, 1991, the proposed construction may garner an exemption if the parcel is covered by a parcel or tentative map approved prior to January 1, 1991 (provided that the final map for the tentative map is approved within the time prescribed

³ Defensible space is defined as:

"The area within the perimeter of a parcel, development, neighborhood or community where basic wild land fire protection practices and measures are implemented, providing the key point of defense from an approaching wildfire or defense against encroaching wild fires or escaping structure fires. The perimeter as used in this regulation is the area encompassing the parcel or parcels proposed for construction and/or development, excluding the physical structure itself. The area is characterized by the establishment and maintenance of emergency vehicle access, emergency water reserves, street names and building identification, and fuel modification measures." (Cal. Code Regs., tit. 14, § 1271.00.)

⁴ All references hereafter to title 14 of the California Code of Regulations are by regulation number only.

⁵ A parcel map is filed when creating subdivisions of four or fewer parcels, while a tentative map and final map are filed when creating subdivisions of five or more parcels. (Gov. Code, §§ 66426, 66428.)

by the local ordinance).⁶ However, this raises the question of the purpose of the building permit exception since virtually any application for a building permit will be preceded by a parcel or tentative map approval for the parcel upon which the construction is proposed, even one which may have been obtained in the distant past.⁷ A well-established rule of statutory construction holds that "[w]henver possible, effect should be given to the statute as a whole, and to its every word and clause, so that no part or provision will be useless or meaningless...." (*Colombo Construction Co. v. Panama Union School Dist.* (1982) 136 Cal.App.3d 868, 876; see *Harris v. Capital Growth Investors XIV* (1991) 52 Cal.3d 1149, 1159 ["In analyzing statutory language, we seek to give meaning to every word and phrase in the statute to accomplish a result consistent with the legislative purpose, i.e., the object to be achieved and the evil to be prevented by the legislation"].)

Our task then is to search for an interpretation of section 4290 which is not only consistent with the legislative purpose but also furnishes independent significance to each of the two exceptions. We believe that the answer lies in the different manner in which each exception is phrased. The first is "where an application for a building permit was filed prior to January 1, 1991," and the second is "to parcel or tentative maps or other developments approved prior to January 1, 1991" The "where" of the first exception implies a broad exemption encompassing all activity related to the building permit, whereas the "to" of the second exception implies an exemption which is limited to matters contained in the parcel or tentative map approval.

Under this reading of section 4290, only those perimeter and access conditions which were imposed during the parcel or tentative map approval process would be immune from the effect of the regulations. Typically, parcel and tentative map approvals include requirements for the improvement of the parcels within the subdivision. The Subdivision Map Act (Gov. Code, §§ 66410-66499.37; "Act")⁸ establishes general criteria for land development planning in the creation of subdivisions throughout the state. Cities and counties are given authority under the legislation to regulate the design and improvement of divisions of land in their areas through a process of approving subdivision maps required to be filed by each subdivider. (§ 66411; *Santa Monica Pines, Ltd. v. Rent Control Board*, *supra*, 35 Cal.3d 858, 869; *South Central Coast Regional Com. v. Charles A. Pratt Construction Co.* (1982) 128 Cal.App.3d 830, 844 845.) A subdivider must obtain approval of the appropriate map before the subdivided parcels are offered for sale, or lease, or are financed. (§§ 66499.30, 66499.31; *Bright v. Board of Supervisors* (1977) 66 Cal.App.3d 191, 193-194.)

The Act sets forth procedures by which cities and counties may impose a variety of specific conditions when approving the subdivision maps. Such conditions typically cover streets, public access rights, drainage, public utility easements, and parks, among other improvements. (§§ 66475-66489; see *Associated Home Builders etc., Inc. v. City of Walnut Creek* (1971) 4 Cal.3d 633, 639-647; *Ayers v. City Council of Los Angeles* (1949) 34 Cal.2d 31, 37-43.)

⁶ The approval of a final map is a ministerial function once the tentative map has been approved and the conditions that were attached to the tentative map have been fulfilled. (Gov. Code, §§ 66458, 66473, 66474. 1; *Santa Monica Pines, Ltd. v. Rent Control Board* (1984) 35 Cal.3d 858, 865; *Youngblood v. Board of Supervisors* (1978) 22 Cal.3d 644, 653.)

⁷ Statutory provisions for tentative maps and final maps first appeared in 1929 (Stats. 1929. ch. 838), while parcel maps were first required in 1971 (Stats. 1971. ch. 1446). (See Cal. Subdivision Map Act Practice (Cont.Ed.Bar 1987) §§ 1.2-1.3, pp. 3-5.)

⁸ All references hereafter to the Business and Professions Code are by section number only.

The Act vests cities and counties with the power to regulate and control the "design and improvement of subdivisions" (§ 66411) independent of the power to impose the specified conditions enumerated above. "Design" is defined as:

" . . . (1) street alignments, grades and widths; (2) drainage and sanitary facilities and utilities, including alignments and grades thereof; (3) location and size of all required easements and rights-of-way; (4) fire roads and firebreaks; (5) lot size and configuration; (6) traffic access; (7) grading; (8) land to be dedicated for park or recreational purposes; and (9) such other specific physical requirements in the plan and configuration of the entire subdivision as may be necessary to ensure consistency with, or implementation of, the general plan or any applicable specific plan." (§66418.)

"Improvement" is defined as:

" . . . any street work and utilities to be installed, or agreed to be installed, by the subdivider on the land to be used for public or private streets, highways, ways, and easements, as are necessary for the general use of the lot owners in the subdivision and local neighborhood traffic and drainage needs as a condition precedent to the approval and acceptance of the final map thereof.

" . . . also . . . any other specific improvements or types of improvements, the installation of which, either by the subdivider, by public agencies, by private utilities, by any other entity approved by the local agency, or by a combination thereof, is necessary to ensure consistency with, or implementation of, the general plan or any applicable specific plan." (§ 66419.)

Accordingly, we believe that when a person applies for a building permit after January 1, 1991, the Board's fire safety regulations would be inapplicable as to any matters approved prior to January 1, 1991, as part of the parcel or tentative map process.⁹ By contrast, a person who applied for a building permit prior to January 1, 1991, would not be subject to any of the access or perimeter requirements set forth in the regulations.

In addition to preserving independent significance for the building permit exception, the aforementioned reading of Public Resources Code section 4290 comports with another principle of statutory construction, namely that "[e]xceptions to the general rule of a statute are to be strictly construed." (*Da Vinci Group v. San Francisco Residential Rent etc. Bd.* (1992) 5 Cal.App.4th 24, 28; see *Goins v. Board of Pension Commissioners* (1979) 96 Cal.App.3d 1005, 1009; see also *Board of Medical Quality Assurance v. Andrews* (1989) 211 Cal.App.3d 1346, 1355 [statutes conferring exemptions from regulatory schemes are narrowly construed].) More specifically, we have cited "the general rule that a grandfather clause, being contrary to the general rule expressed in a statute, must be narrowly construed. [Citations.]" (57 Ops.Cal.Atty.Gen. 284, 286 (1974).) A blanket exemption for all construction and development activity related to a parcel covered by an approved tentative or parcel map (provided the final map for the tentative map is approved within the time prescribed by the local ordinance) would violate these principles of statutory construction.

⁹ Regulation 1270.02. for example, exempts "[r]oads required as a condition of tentative [or] parcel maps prior to the effective date of these regulations...."

On the other hand, we decline to construe the grandfather clause here so narrowly that *all* of the Board's fire safety regulations become applicable when the owner of a parcel covered by a parcel or tentative map approved prior to January 1, 1991, applies for a permit to build on that parcel after January 1, 1991. To do so would mean that the exception for approved tentative or parcel maps would afford the landowner nothing at the construction and development stage. Again, we are guided by the principle that a statute should be interpreted in such a way that no part or provision will be rendered useless or meaningless. (*Colombo Construction Co. v. Panama Union School District, supra*, 136 Cal.App. 868, 876.)

Finally, we observe the rule that if more than one construction of a statute appears possible, we must adopt the one that leads to the most reasonable result. (*Industrial Indemnity Co. v. City and County of San Francisco* (1990) 218 Cal.App.3d 999, 1008.) An exemption from the regulations for those access and perimeter conditions which are included in the approval of a parcel or tentative map prior to January 1, 1991, serves to lock in reasonable entitlements while ensuring that other fire safety standards may be applied at the time a building permit is sought subsequent to January 1, 1991.

On the basis of the foregoing analysis and principles of statutory construction, we conclude that the fire safety standards adopted by the Board for development on state responsibility area lands apply to the perimeters and access to buildings constructed after January 1, 1991, on parcels created by parcel or tentative maps approved prior to January 1, 1991, to the extent that conditions relating to the perimeters and access to the buildings were not imposed as part of the approval of the parcel or tentative maps.

Appendix D

Stanley Mosk
Attorney General

State of California
Office of the Attorney General
Department of Justice
Library and Courts Building, Sacramento 14
March 23, 1964

Department of Conservation
Division of Forestry
State Office Building No. 1
Sacramento, California 95814

Attention: Mr. F. H. Raymond
State Forester

Re: Law Enforcement Fire Protection and
Clearance Requirements
Public Resources Code § 4105

Dear Mr. Raymond:

This is in reply to your memo of November 17, 1963, requesting the opinion of this office on the following two questions:

1. Does Public Resources Code section 4105 (all references will be to the Public Resources Code unless otherwise indicated), as added by Stats. 1963, Chapter 2038, apply within the boundaries of incorporated cities?
2. If the answer is yes, may the local fire chief or other enforcement agency exercise the authority granted to the State Forester in subdivision (b) to prescribe firebreaks in excess of 30 feet where extra hazardous conditions exist?

You have forwarded to this office a copy of the opinion of Harold W. Kennedy, County Counsel of the County of Los Angeles, dated November 26, 1963, in response to substantially the same questions by Chief K. E. Klinger of that county. We are in substantial agreement with the conclusions of the opinion so far as they relate directly to the above questions.

Section 4105 provides as follows:

Any person who owns, leases, controls, operates, or maintains any building or structure in, upon, or adjoining any mountainous area or forest-, brush-, or grass-covered lands or land covered with flammable material shall at all times do all of the following:

- (a) Maintain around and adjacent to such building or structure a firebreak made by removing and clearing away, for a distance of not less than 30 feet on each side thereof or to the property line, whichever is nearer, all flammable vegetation or other combustible growth. This subdivision does not apply to single specimens of trees, ornamental shrubbery, or similar plants which are used as ground cover, provided that they do not form a means of rapidly transmitting fire from the native growth to any building or structure.

- (b) Maintain around and adjacent to any such building or structure additional fire protection or firebreak made by removing all brush, flammable vegetation, or combustible growth which is located from 30 feet to 100 feet from such building or structure or to the property line, whichever is nearer, as may be required by the State Forester when he finds that because of extra hazardous conditions a firebreak of only 30 feet around such building or structure is not sufficient to provide reasonable fire safety. Grass and other vegetation located more than 30 feet from such building or structure and less than 18 inches in heights about the ground may be maintained where necessary to stabilize the soil and prevent erosion.
- (c) Remove that portion of any tree which extends within 10 feet of the outlet of any chimney or stovepipe.
- (d) Maintain any tree adjacent to or overhanging any building free of dead or dying wood.
- (e) Maintain the roof of any structure free of leaves, needles, or other dead vegetative growth.
- (f) Every chimney or stovepipe that is attached to any fireplace, stove, or other device that burns any solid or liquid fuel shall be provided and maintained at all times with a screen over the outlet. Such screen shall be constructed of nonflammable material with openings of not more than one-half inch in size.

Enacted as it was by a general act, this section is applicable everywhere in the state including incorporated cities, unless such application is otherwise qualified or restricted. See, Ex parte Beck, 162 Cal. 701, 711, 124 P. 543. There appear to be no provisions expressly or impliedly excluding incorporated cities from the area in which this section is to apply. In fact, it is quite clear from section 1 of chapter 2038, Stats. 1963, adding section 4105 to the code, that the purpose of the legislation is to protect life and property from fire in all parts of the state without reference to the political subdivision within which particular areas fall:

The Legislature of the State of California hereby finds and declares that the unrestricted use of grass-, grain-, brush-, or forest-covered land within the State is a potential menace to life and property from fire and resulting erosion.

See, also, section 3, chapter 2038, Stats. 1963. It is true, of course, that section 4162 provides that the requirements of article 5, chapter 1, division 4, of the code, are not to apply to the setting of fires on lands within any municipal corporation. However, section 4105 was not added to that article and the limits of section 4162 has no application to section 4105.

We conclude, therefore, that the provisions of section 4105 are applicable within the limits and boundaries of incorporated cities.

In answer to your second question, particular note is made of the fact that the authority under subdivision (b) of section 4105 to prescribe and require wider firebreaks in hazardous areas is expressly granted only to the State Forester. There appears, therefore, no cause or basis for implying that such authority may be exercised by any other person. The Legislature in the same statute adopting this section leaves no room for doubt when authority is given jointly to the State Forester and another agency to prescribe requirements to meet special conditions. For example, section 4107, added by Stats. 1963, chapter 2038, confers such authority to "the State Forester or the agency having primary responsibility for the fire protection" of the areas involved.

See, also, section 4106. The failure to expressly give authority to any person or agency other than the

State Forester in subdivision (a) of section 4105 under such circumstances doubly evidences the legislative intent that this authority is to be exercised only by the State Forester. It may also be noted that the power to prescribe such additional clearances is a discretionary power and consequently is personal to the State Forester and not subject to delegation by him to any other public officer such as a local fire chief.

While our conclusion is that subdivision (b) of section 4105 vests no authority in a local fire chief or responsible enforcement agency to require a firebreak in excess of 30 feet, it is our opinion that the matter can be handled by appropriate local ordinance, rule, or regulation. Section 4018, added by chapter 2038, provides:

Counties, cities and counties, cities, and districts may adopt ordinances, rules, or regulations to provide fire hazard conditions.

Hence, to meet local conditions a city, as well as a county, city and county, or a district may adopt an ordinance, rule, or regulations prescribing or requiring a firebreak in excess of the 30 feet required by subdivision (a) of section 4105.

Very truly yours,

STANLEY MOSK
Attorney General

R. H. CONNETT
Deputy Attorney General

RHC:cb

Appendix E

SRA FIRE HAZARD ZONING REGULATIONS SUMMARY

- Public Resources Code Sections 4201-4204 and Health and Safety Code Section 13108.5 were enacted in 1982 following fires in San Bernardino, Napa and Los Angeles Counties.
- Requires that CDF classify all SRA lands into fire hazard severity zones, and that the State Fire Marshal's Office adopt roofing and attic-opening regulations relevant to the new SRA fire hazard assessment.
- CDF and Teale Data Center published SRA Fire Hazard Severity Zone maps, which must then be subject to local public hearings.
- CDF is required to conduct a periodic review of fire hazard severity zones every five years.
- Class C roofing requirements were finally adopted by the State Fire Marshal in 1988 after public notification and hearings.
- Senate Bill 1075 became law in 1991, adding Public Resources Code Section 4290.
- State mandated fire safe standards for roads and access, vegetation clearance around structures, signage and building identification, fuel breaks and greenbelts, and private water supplies resulted.
- Detailed regulations are in Title 14, California Code of Regulations, Sections 1270-1276.

Appendix F

VERY HIGH FIRE HAZARD SEVERITY ZONING (LRA) REGULATIONS SUMMARY

- Assembly Bill 337 (Bates) became law January 1, 1993, adding Government Code Sections 51175 et seq., and amended Health and Safety Code Section 13108.5
- Regards Very High Fire Hazard Severity Zones (VHFHSZ) within Local Responsibility Areas (LRA)
- CDF designated lead agency to determine areas within LRA which meet established criteria for a VHFHSZ
- Participation of local authority entirely discretionary. Local authority may disagree classification and choose not to adopt, or make the contention that its jurisdiction meets or exceeds Bates
- If local jurisdictions desire to participate in the Bates project, they must adopt a local ordinance which requires at least a class B roof for all new construction, and when at least 50% of the existing roof is replaced; along with a number of other fire safe measures as 30-foot minimum clearances, additional clearances of 30-40 feet, screens over chimneys, no overhanging branches, and the like
- Model ordinance, as developed by the State Fire Marshal, can be adopted as a local ordinance which complies with Bates
- Once local jurisdictions are notified by CDF that such a zone exists within their jurisdiction, they have 120-days to enact the more restrictive ordinance, unless the jurisdiction already has in place an ordinance which meets or exceeds that required by Bates
- If the local authority chooses to exclude an area from the requirements to maintain vegetation clearances as prescribed in Bates, that local authority must make findings supported by substantial evidence in the record that the requirements of Government Code Section 51182 are not necessary for effective fire protection within the area
- In contrast to the above, the local authority can also include areas within the VHFHSZ in their respective jurisdictions which were not identified by CDF, following findings supported by substantial evidence in the record
- Changes made by the local authority to the recommendations of CDF shall be final and are not rebuttable by the Director
- The term Very High Fire Hazard Severity Zone need not necessarily be used in local ordinances to describe this area
- Assembly Bill 3819 became law on September 25, 1994, adding Government Code Sections 51178.5 and 51189, and amending Health and Safety Code Sections 13108.5 and 13132.7.
- Requires that local agencies allow for public review of identified VHFHSZ in the form of maps within 30 days of notification by the CDF director
- Requires that the State Fire Marshal's Office develop a Model Ordinance that provides for comprehensive space and structure defensibility, including building design and construction requirements.

Appendix G

MODEL ORDINANCE FOR VERY HIGH FIRE HAZARD SEVERITY ZONE ADOPTION

ORDINANCE NO. _____

An ordinance of the city (or county or district) of _____ requiring the fire chief to designate very high fire hazard severity zones and the building official to enforce the requirements of section 3203, title 24 California code of regulations.

THE _____ COUNCIL OF THE _____ DOES ORDAIN AS FOLLOWS:

Section 1: The Fire Chief is hereby authorized to designate Very High Fire Hazard Severity Zones within 120 days of receiving recommendations from the California Department of Forestry and Fire Protection.

Section 2: The Fire Chief may designate areas not identified as Very High Fire Hazard Severity Zones by the California Department of Forestry and Fire Protection following a finding supported by substantial evidence in the record that the requirements for Very High Fire Hazard Severity Zones are necessary for effective fire protections within the area(s).

Section 3: The Fire Chief may decline to designate areas identified by the California Department of Forestry and Fire Protection as Very High Fire Hazard Severity Zones following a finding supported by substantial evidence in the record that the requirements for Very High Fire Hazard Severity Zones are not necessary for effective fire protection within the area(s).

Section 4: The Building Official shall enforce the provisions of Section 3203, Title 24 California Code of Regulations, in all Very High Fire Hazard Severity Zones designated by the Fire Chief (Section 4 may be deleted if more stringent requirements prevail).

On the motion of Council Member _____, seconded by Council Member _____. The role call vote:

AYES:

NOES:

ABSENT:

The foregoing ordinance was passed and adopted this ____ day of _____, 19____.

(mayor or lead council member)

Attest: _____
(city clerk)

Appendix H

ROOFING REGULATIONS SYNOPSIS

- Assembly Bill 3819 (Brown) became law on September 25, 1994, adding Government Code Sections 51178.5 and 51189; adding Public Resources Code Section 4205; and amended Health and Safety Code Sections 13108.5 and 13132.7.
- The Brown bill furthered the roof covering concepts of the Bates Bill.
- Assembly Bill 747 (V. Brown) became law on August 4, 1995, amending Health and Safety Code Section 13132.7.
- Assembly Bill 423 (Dutra) became law on January 1, 2000, once again amending Health and Safety Code Section 13132.7.
- Within VHFHSZ, in both SRA and LRA, requires a Class A roof for all new buildings, all repairs and replacements, and for existing buildings where 50% or more of the roof area is re-roofed within a one-year, the entire roof covering must be replaced with Class A materials. If the local jurisdiction adopts the State Fire Marshal's Model Ordinance for the Defensibility of Space and Structures, and transmits a copy of that ordinance to CDF, Class B materials are allowed.
- For all other SRA areas, at least Class B materials must be used under the same circumstances as explained above.
- All other areas of California shall have at least a Class C roof covering, and the same circumstances apply as explained above.
- Requires all installers of roof coverings to provide a certificate of the roof covering classification
- Permits certain historical buildings to utilize alternative fire retardant roof coverings
- Requires that wood roof covering designs have passed a 10-year weather and rain test
- Requires that the insurance commissioner accept treated wood shakes for existing "replacement cost" insurance policies

Appendix I

MODEL ORDINANCE FOR THE DEFENSIBILITY OF SPACE AND STRUCTURES

ORDINANCE NO. _____

AN ORDINANCE OF THE (CITY/COUNTY) OF, _____, CALIFORNIA, ADOPTED PURSUANT TO THE STATE HEALTH AND SAFETY CODE, AMENDING THE LATEST ADOPTED EDITION OF THE UNIFORM BUILDING AND FIRE CODES TO REGULATE HAZARDOUS FIRE CONDITIONS IN THE VERY HIGH FIRE HAZARD SEVERITY ZONES DESIGNATED IN ACCORDANCE WITH THE CODE OF (CITY/COUNTY)

The (City Council/Board of Supervisors) of the (city/county) of _____ does ordain as follows:

SECTION 1. This Ordinance shall apply to all real property located within the (city/unincorporated area of the county) which is within the very high fire hazard severity zones designated pursuant to Section of the Code of (city/county).

SECTION 2. Definitions.

Accessory Building: Any building used as an accessory to residential, commercial, recreational, industrial, or educational purposes as defined in the latest adopted edition of the California Building Code, Group U, Division 1, Occupancy that requires a building permit.

Building: Any structure used or intended for supporting or sheltering any use or occupancy that is defined in the latest adopted edition of the California Building Code, except Group U, Division 1, Occupancy. For the purposes of this subchapter, building includes mobile homes and manufactured homes, churches and day care facilities.

Dead-End Road: A road that has only one point of vehicular ingress/egress, including cur-de-sacs and looped roads.

Defensible Space: The area within the perimeter of a parcel, development, neighborhood or community where basic wildland fire protection practices and measures are implemented, providing the key point of defense from an approaching wildfire or defense against encroaching wildfires or escaping structure fires. The perimeter as used herein is the area encompassing the parcel or parcels proposed for construction and/or development, excluding the physical structure itself. The area is characterized by the establishment and maintenance of emergency vehicle access, emergency water reserves, street names and building identification, and fuel modification measures.

Development: As defined in Section 66418.1 of the California Government Code.

Driveway: A vehicular access that serves no more than two buildings, with no more than 3 dwelling units on a single parcel, and any number of accessory buildings.

Dwelling Unit: Any building or portion thereof which contains living facilities, including provisions for sleeping, eating, cooking and/or sanitation for not more than one family.

Greenbelts: A facility or land use, designed for a use other than fire protection, which will slow or resist the spread of a wildfire. Includes parking lots, irrigated or landscaped areas, golf courses, parks, playgrounds, maintained vineyards, orchards or annual crops that do not cure in the field.

Hammerhead/T: A roadway that provides a "T" shaped, three-point turnaround space for emergency equipment, being no narrower than the road that serves it.

Hydrant: A valved connection on a water supply/storage system, having at least one 2-1/2 inch outlet, with male American National Fire Hose Screw Threads (NH) used to supply fire apparatus and hoses with water.

Occupancy: The purpose for which a building, or part thereof, is used or intended to be used.

One-Way Road: A minimum of one traffic lane width designed for traffic flow in one direction only.

Roads, Streets, Private Lanes: Vehicular access to more than one parcel; access to any industrial or commercial occupancy, or vehicular access to a single parcel with more than two buildings or four or more dwelling units.

Roadway: Any surface designed, improved, or ordinarily used for vehicle travel.

Same Practical Effect: As used in this ordinance, means an exception or alternative with the capability of applying accepted fire suppression strategies and tactics, and provisions for firefighter safety, including:

- (a) access for emergency fire equipment,
- (b) safe civilian evacuation,
- (c) signing that avoids delays in emergency equipment response,
- (d) available and accessible water to effectively attack fire or defend a structure from fire, and
- (e) fuel modification sufficient for civilian and firefighter safety.

Structure: That which is built or constructed, an edifice or building of any kind or any piece of work artificially built up or composed of parts joined together in some definite manner.

Traffic Lane: The portion of a roadway that provides a single line of vehicle travel.

Turnaround: A roadway, unobstructed by parking, which allows for a safe opposite change of direction for emergency equipment. Design of such area may be a harnmerhead/T or terminus bulb.

Turnouts: A widening in a roadway to allow vehicles to pass.

Vertical Clearance: The minimum specified height of a bridge or overhead projection above the roadway.

SECTION 3. The Uniform Building Code (U.B.C.), (latest adopted edition) as published by the International Conference of Building Officials and the Uniform Fire Code (U.F.C.), (latest adopted edition) as published by the International Conference of Building Officials and Western Fire Chiefs Association, including the appendices thereto, as adopted pursuant to Section _____ of the _____ Code of (city/county), are hereby amended as follows:

I. Add the following, new sub-section to U.B.C. Section _____: Information on Plans and Specifications.

Fire Protection Information on Plans and Specifications in Very High Fire Hazard Severity Zones. In addition to all other relevant provisions of this code and the Uniform Fire Code, appendices and amendments thereto, a vicinity plan, scale no smaller than 1 inch equals 100 feet, shall be submitted to and approved by the fire department prior to the issuance of a grading permit or, if no grading permit is to be issued, prior the issuance of a building permit. The plan shall show the following:

1. All existing and proposed private and public streets on the proposed development property and within 300 feet of the property line of the proposed development, and so identified. with street width dimensions.
2. The location and identification of all existing and proposed fire hydrants within 300 feet of the property line of the proposed development. The water supply shall meet the fire flow requirements as set forth in the latest adopted edition of the U.F.C. and U.B.C., and amendments thereto.
3. The location, occupancy classification, and use of abutting properties.
4. Preliminary fuel modification plans for all improvements in areas containing combustible vegetation shall be submitted to and approved by the (authority having jurisdiction) concurrent with the submittal for approval of any tentative map. Final fuel modification plans shall be submitted to and approved by the (authority having jurisdiction) prior to the issuance of a grading permit. The plans shall consider the criteria set forth in the Fuel

Modification Plan Guidelines for Very High Fire Hazard Severity Zones.

II. Add the following new definition to U.B.C. Section _____: Definitions.

VERY HIGH FIRE HAZARD SEVERITY ZONE. Any geographic area designated pursuant to Government Code Section 51178 to contain the type and condition of vegetation, topography, weather, and structure density to increase the possibility of conflagration fires.

III. Add the following new sub-section to U.F.C. Section _____: Information on Plans and Specifications.
Fire Protection Information on Plans and Specifications in Very High Fire Hazard Severity Zones.

In addition to all other relevant provisions of this code and the Uniform Building Code, appendices and amendments thereto, a vicinity plan, scale no smaller than 1 inch equals 100 feet, shall be submitted to and approved by the fire department prior to the issuance of a grading permit or, if no grading permit is to be issued, prior to the issuance of a building permit. The plan shall show the following:

1. All existing and proposed private and public streets on the proposed development property line within 300 feet of the property line of the proposed development, and so identified with street width dimensions.
2. The location and identification of all existing and proposed fire hydrants within 300 feet of the property line of the proposed development. The water supply shall meet the fire flow requirements as set forth in the latest adopted edition of U.F.C. and U.B.C., and amendments thereto.
3. The location, occupancy classification, and use of abutting properties. Preliminary fuel modification plans for all improvements in areas containing combustible vegetation shall be submitted to and approved by the (authority having jurisdiction) concurrent with the submittal for approval of any tentative map. Final fuel modification plans shall be submitted to and approved by the (authority having jurisdiction) prior to the issuance of a grading permit. The plans shall meet the criteria set forth in the Fuel Modification Plan Guidelines for Very High Fire Hazard Severity Zones.

IV. Add the following new definition to U.F.C. Section _____: Definitions.

VERY HIGH FIRE HAZARD SEVERITY ZONE. Any geographic area designated pursuant to Government Code Section 51178 to contain the type and condition of vegetation, topography, weather, and structure density to increase the possibility of conflagration fires.

V. Add the following paragraph to U.F.C. Section _____: Emergency Access.

Road and street networks, whether public or private, shall provide for safe access for emergency fire equipment and civilian evacuation concurrently, and shall provide unobstructed traffic circulation during a fire emergency consistent with Sections VI through XVI.

VI. Add the following paragraph to U.F.C. Section _____: Roadway Width.

All roads shall be constructed to provide a minimum of two nine-foot traffic lanes providing two-way traffic flow, unless other standards are provided in his ordinance or additional requirements are mandated by local jurisdictions or local subdivision requirements.

VII. Add the following paragraph to U.F.C. Section _____: Roadway Surface.

The surface shall provide unobstructed access to all vehicles, including sedans and fire engines. Surfaces should be established in conformance with local ordinances, and be capable of supporting at least a 40,000 pound load.

VIII. Add the following paragraph to U.F.C. Section _____: Roadway Grades.

The maximum grade for all roads, streets, private lanes and driveways shall not exceed 16 percent.

IX. Add the following paragraph to U.F.C. Section _____: Roadway Radius.

- (a) No roadway shall have a horizontal inside radius of curvature of less than 50 feet and additional surface width of 4 feet shall be added to curves of 50-100 feet radius; 2 feet to those from anything over 100 feet.
- (b) The length of vertical curves in roadways, exclusive of gutters, ditches, and drainage structures designed to hold or divert water, shall be not less than 100 feet.

X. Add the following paragraph to U.F.C. Section _____: Roadway Turnarounds.

Turnarounds are required on driveways and dead-end roads as specified in this article. The minimum turning radius for a turnaround shall be 40 feet from the center line of the road. If a hammerhead/T is used, the top of the "T" shall be a minimum of 60 feet in length.

XI. Add the following paragraph to U.F.C. Section _____: Roadway Turnouts.

Turnouts shall be a minimum of 10 feet wide and 30 feet long with a minimum 25 foot taper on each end.

XII. Add the following paragraph to U.F.C. Section _____: Roadway Structures.

(a) All driveway, road, street, and private land roadway structures shall be constructed to carry at least the maximum load and provide the minimum vertical clearance as required by Vehicle Code Sections 35550, 35750, and 35250.

(b) Appropriate signing, including but not limited to weight or vertical clearance limitations, one-way road or single lane conditions, shall reflect the capability of each bridge.

(c) A bridge with only one traffic lane may be authorized; however, it shall provide for unobstructed visibility from one end to the other and turnouts at both ends.

XIII. Add the following paragraph to U.F.C. Section _____: One-Way Roads.

All one-way roads shall be constructed to provide a minimum of one 10-foot traffic lane. All one-way roads shall connect to a two-lane roadway at both ends, and shall provide access to an area currently zoned for no more than 10 dwelling units. In no case shall it exceed 2640 feet in length. A turnout shall be placed and constructed at approximately the midpoint of each one-way road.

XIV. Add the following paragraph to U.F.C. Section _____: Dead-End Roads.

(a) The maximum length of a dead-end road, including all dead-end roads accessed from that dead-end road, shall not exceed the following cumulative lengths, regardless of the number of parcels served:

1. parcels zoned for less than one acre - 800 feet
2. parcels zoned for 1 acre to 4.99 acres - 1320 feet
3. parcels zoned for 5 acres to 19.99 acres - 2640 feet
4. parcels zoned for 20 acres or larger - 5280 feet

All lengths shall be measured from the edge of the roadway surface at the intersection that begins the road to the end of the road surface at its farthest point. Where a dead-end road crosses areas of differing zoned parcel sizes, requiring different length limits, the shortest allowable length shall apply.

(b) Where parcels are zoned 5 acres or larger, turnarounds shall be provided at a maximum of 1320 foot intervals.

(c) Each dead-end road shall have a turnaround constructed at its terminous.

XV. Add the following paragraph to U.F.C. Section _____: Driveways.

All driveways shall provide a minimum 10 foot traffic lane and unobstructed vertical clearance of 15 feet along its entire length.

(a) Driveways exceeding 150 feet in length, but less than 800 feet in length, shall provide a turnout near the midpoint of the driveway. Where the driveway exceeds 800 feet, turnouts be provided no more than 400 feet apart.

(b) A turnaround shall be provided at all building sites on driveways over 300 feet in length, and shall be within 50 feet of the building.

XVI. Add the following paragraph to U.F.C. Section _____: Gate Entrances.

(a) Gate entrances shall be at least two feet wider than the width of the traffic lane(s) serving that gate.

(b) All gates providing access from a road to a driveway shall be located at least 30 feet from the roadway and shall open to allow a vehicle to stop without obstructing traffic on that road.

(c) Where a one-way road with a single traffic lane provides access to a gated entrance, a 40 foot turning radius shall be used.

XVII. Add the following paragraph to U.F.C. Section _____: Size of Letters, Numbers and Symbols for Street and Road Signs.

Size of letters, numbers, and symbols for street and road signs shall be a minimum 3 inch letter height, 3/8 inch

stroke, reflectorized, contrasting with the background color of the sign.

XVIII. Add the following paragraphs to U.F.C. Section _____: Visibility and Legibility of Street and Road Signs.

Street and road signs shall be visible and legible from both directions of vehicle travel for a distance of at least 100 feet.

XIX. Add the following paragraph to U.F.C. Section _____: Height of Street and Road Signs.

Height of street and road signs shall be uniform (county/city wide), and meet the visibility and legibility standards of this ordinance.

XX. Add the following paragraph to U.F.C. Section _____: Names and Numbers of Street and Road Signs.

Newly constructed or approved public and private roads and streets must be identified by a name or number through a consistent (county/city wide) system that provides for sequenced or patterned numbering and/or nonduplicative naming within each (county/city). All signs shall be mounted and oriented in a uniform manner. This section does not require any entity to rename or renumber existing roads or streets, nor shall a roadway providing access only to a single commercial or industrial occupancy require naming or numbering.

XXI. Add the following paragraph to U.F.C. Section _____: Intersecting Roads, Street, and Private Lanes.

Signs required by this ordinance identifying intersecting roads, streets and private lanes shall be placed at the intersection of those roads, streets, and/or private lanes.

XXII. Add the following paragraph to U.F.C. Section _____: Signs Identifying Traffic Access Limitations.

A sign identifying traffic access or flow limitations, including but not limited to weight or vertical clearance limitations, dead-end road, one-way road or single lane conditions, shall be placed: (a) at the intersection preceding the traffic access limitation, and (b) no more than 100 feet before such traffic access limitation.

XXIII. Add the following paragraph to U.F.C. Section _____: Installation of Road, Street, and Private Lane Signs.

Road, street and private lane signs required by this ordinance shall be installed prior to final acceptance of road improvements.

XIV. Add the following paragraph to U.F.C. Section _____: Addresses for Buildings.

All buildings shall be issued an address by the local jurisdiction which conforms to the jurisdiction's overall address system. Accessory buildings will not be required to have a separate address; however, each dwelling unit within a building shall be separately identified.

XXV. Add the following paragraph to U.F.C. Section _____: Size of Letters, Numbers, and Symbols for Addresses.

Size of letters, numbers and symbols for addresses shall be a minimum 3 inch letter height, 3/8 inch stroke, reflectorized, contrasting with the background color of the sign.

XXVI. Add the following paragraph to U.F.C. Section _____: Installation, Location, and Visibility of Addresses.

(a) All buildings shall have a permanently posted address, which shall be placed at each driveway entrance and visible from both directions of travel along the road. In all cases, the address shall be posted at the beginning of construction and shall be maintained thereafter, and the address shall be visible and legible from the road on which the address is located.

(b) Address signs along one-way roads shall be visible from both the intended direction of travel and the opposite direction.

(c) Where multiple addresses are required at a single driveway, they shall be mounted on a single post.

(d) Where a roadway provides access solely to a single commercial or industrial business. The address sign shall be placed at the nearest road intersection providing access to that site.

Amend Section _____ of the U.F.C.: Enforcement.

When the (authority having jurisdiction) finds in any building or on any premises combustible, hazardous or explosive materials or dangerous accumulations of rubbish; or finds unnecessary accumulations of wastepaper, boxes, shavings or any highly flammable materials which are so situated as to endanger life or property; or finds obstructions to or on fire escapes, stairs, passageways, doors or windows that reasonably tend to interfere with the access and/or operations of the fire department or the egress of the occupants of such building or premises; or finds that this code is being violated, the is authorized to issue orders as (authority having jurisdiction) necessary for the enforcement of the fire prevention laws and ordinances governing the same and for the safeguarding of life and property from fire.

SECTION 4. Enforcement. For purposes of enforcement reference is made to amended Section 103.4.1.1 and Appendix VI-C of the 1994 edition of the Uniform Fire Code which is adopted per Section 3 of this document.

SECTION 5. Reduction of Fire Hazard. Any person who owns, leases, controls, operates, or maintains any dwelling or structure in, upon, or adjoining any mountainous area, forest-covered land, brush-covered land, grass-covered land, or any land that is covered with flammable material, which area or land is within a very high fire hazard severity zone shall at all times do all of the following:

(1) Firebreaks. Maintain around and adjacent to the building or structure a firebreak made by removing and clearing away, for a distance of not less than 30 feet on each side thereof or to the property line, whichever is nearer, all flammable vegetation or other combustible growth. This paragraph does not apply to single specimens of trees, ornamental shrubbery or similar plants that are used as groundcover, if they do not form a means of rapidly transmitting fire from the native growth to any building or structure.

(2) Additional Firebreaks. Maintain around and adjacent to any such building or structure additional fire protection or firebreaks made by removing all brush, flammable vegetation, or combustible growth which is located from 30 feet to 100 feet from any such building or structure or to the property line, whichever is nearer, as may be required by the Fire Chief if he/she finds that, because of extra hazardous condition, a firebreak of only 30 feet around the building or structure is not sufficient to provide reasonable fire safety. Grass and other vegetation located more than 30 feet from the building or structure and less than 18 inches in height above the ground may be maintained where necessary to stabilize the soil and prevent erosion.

(3) Trees. Remove that portion of any tree that extends within 10 feet of the outlet of any chimney or stovepipe.

(4) Dead or Dying Wood. Maintain any tree adjacent to or overhanging any building free of dead or dying wood.

(5) Vegetative Growth. Maintain the roof of any structure free of leaves, needles, or other dead vegetative growth.

(6) Chimney and Stovepipe. Provide and maintain at all times a screen over the outlet of every chimney or stovepipe that is attached to any fireplace, stove, or other device that burns any solid or liquid fuel. The screen shall be constructed of nonflammable material with openings of not more than one-half inch in size.

(7) Setback. All parcels 1 acre and larger shall provide a minimum 30 foot setback for buildings and accessory buildings from all property lines. For parcels less than 1 acre, jurisdictions shall provide for the same practical effect.

(8) Disposal of Flammable Vegetation and Fuels. Disposal, including chipping, burying, burning or removal to a landfill site approved by the local jurisdiction, of flammable vegetation and fuels caused by site development and construction, road and driveway construction, and fuel modification shall be completed prior to completion of road construction or final inspection of a building permits.

Greenbelts. Subdivisions and other developments, which propose greenbelts as a part of the development plan, shall locate said greenbelts strategically as a separation between wildland fuels and structures. The locations shall be approved by the (authority having jurisdiction).

A person is not required under this section to maintain a clearing on any land if that person does not have the legal right to maintain the clearing nor is any person required to enter upon property that is owned by any other person without the consent of the owner of the property.

SECTION _____ : Exceptions to Section 5. (a) Section 5 of this ordinance shall not apply to any land or water area acquired or managed for one or more of the following purposes or uses:

(1) Habitat for endangered or threatened species, or any species that is a candidate for listing as an endangered or threatened species by the state or federal government.

- (2) Land kept in a predominantly natural state as habitat for wildlife, plant, or animal communities.
- (3) Open space lands that are environmentally sensitive parklands.

Other lands having scenic values and declared by the (City Council/Board of Supervisors) of the (city/county) of, or by state or federal law.

(a) This exemption applies whether the land or water area is held in fee title or any lesser interest. This exemption applies to any public agency, any private entity that has dedicated the land or water areas to one or more of those purposes or uses, or any combination of public agencies and private entities making that dedication.

(b) This section shall not be construed to prohibit the use of properly authorized prescribed burning to improve the biological function of land or to assist in the restoration of desired vegetation.

(c) In the event that any lands adjacent to any land or water area described in subdivision (a) are improved such that they are subject to Government Code Section 51182, the obligation to comply with Section 51182 shall be with the person owning, leasing, controlling, operating, or maintaining the occupied dwelling or occupied structure on the improved lands. All maintenance activities and other fire prevention measures required by Section 51182 shall be required only for the improved lands, not the land and water areas described in subdivision (a).

Amend Section _____ of the UBC: Building Standards.

Buildings and structures hereafter constructed, or relocated into Very High Fire Hazard Severity Zones shall, in addition to the requirements of the California Building Code and any other local ordinances, meet the following construction requirements.

(a) Eaves. Eaves shall be protected on the exposed underside by materials approved for one-hour-rated fire-resistive construction. Fascias are required and must be protected on the backside by materials approved for one-hour-rated fire-resistive construction or 2-inch (51 mm) nominal dimension lumber.

(b) Roofs. All new structures, and every existing structure where 50 percent or more of the total area of the existing building is re-roofed within any one year period within a very high fire hazard severity zone shall have at least a Class B roof.

(c) Underfloor Areas. Buildings or structures shall have all underfloor areas enclosed to the ground with exterior walls in accordance with Section (applicable UBC Section).

Exception: Complete enclosure may be omitted where the underside of all exposed floors and all exposed structural columns, beams and supporting walls are protected as required for exterior one-hour-rated fire-resistive construction.

(d) Unenclosed Accessory Structures. Unenclosed accessory structures attached to buildings with habitable spaces and projections, such as decks, shall be of one-hour-rated fire-resistive construction, or constructed with noncombustible materials.

Exception: When 100 feet of defensible space is provided, patio roofs may be constructed of combustible materials not less than 2x4 inch nominal size and arbors or open lattice work sunshades may be constructed of combustible materials not less than 2x2 inch nominal size.

(e) Underfloor Areas (Attached Structure). When the attached structure is located and constructed so that the structure or any portion thereof projects over a descending slope surface, the area below the structure shall have all underfloor areas enclosed to within 6 inches (152 mm) of the ground, with exterior walls in accordance with Section (applicable UBC Section).

(f) Windows. Exterior windows, window walls and skylights shall be tempered glass or multilayered glazed panels.

(g) Doors. Exterior doors, other than vehicular access doors to garages, shall be noncombustible or solid core not less than 1-3/4 inch (45 mm) thick. Windows within doors and glazed doors shall be in accordance with Section (applicable UBC Section).

(h) Attics. Attic ventilation openings, foundation or underfloor vents, or other ventilation openings, foundation or underfloor vents, or other ventilation openings in vertical exterior walls and vents through roofs shall not exceed 144 square inches (0.0929m²) each. Such vents shall be covered with noncombustible corrosion-resistant mesh with openings not to exceed 1/4 inch (6.4 mm).

Attic ventilation openings shall not be located in soffits, in eave overhangs, between rafters at eaves, or in other overhang areas. Gable end and dormer vents shall be located at least 10 feet (3048 mm) from property lines. Underfloor ventilation openings shall be located as close to grade as practical.

(i) Walls. Detached accessory structures located less than 50 feet (15,240 mm) from a building containing

habitable space shall have exterior walls constructed with materials approved for one-hour-rated fire-resistive construction or constructed with noncombustible materials on the exterior side.

(j) Underfloor Areas (Detached Structure). When the detached structure is located and constructed so that the structure or any portion thereof projects over a descending slope surface, the area below the structure shall have all underfloor areas enclosed to within 6 inches (152 mm) of the ground, with exterior walls in accordance with Section (applicable UBC Section)

SECTION_____. Findings. The provisions of this ordinance are reasonably necessary because of the following local climatic, geographical and topographical conditions:

(a) Very high fire hazard severity zones have been identified and adopted by local ordinance pursuant to Government Code Sections 51175 through 51178.

(b) The very high fire hazard severity zones are located in areas which are subject to periodic conditions of high velocity winds and high temperatures with accompanying low humidity.

(c) The climatic conditions described above are further accentuated by the topographical features of the hill and canyon areas, and the presence of highly combustible vegetation in the identified very high fire hazard severity zones.

(d) The conditions described above make these areas nearly inaccessible and operationally difficult for fire suppression and evacuation activities.

These findings are made pursuant to Sections 17958.5 and 17958.7 of the Health and Safety Code.

Appendix I

MODEL ORDINANCE FOR THE DEFENSIBILITY OF SPACE AND STRUCTURES

ORDINANCE NO. _____

AN ORDINANCE OF THE (CITY/COUNTY) OF, _____, CALIFORNIA, ADOPTED PURSUANT TO THE STATE HEALTH AND SAFETY CODE, AMENDING THE LATEST ADOPTED EDITION OF THE UNIFORM BUILDING AND FIRE CODES TO REGULATE HAZARDOUS FIRE CONDITIONS IN THE VERY HIGH FIRE HAZARD SEVERITY ZONES DESIGNATED IN ACCORDANCE WITH THE CODE OF (CITY/COUNTY)

The (City Council/Board of Supervisors) of the (city/county) of _____ does ordain as follows:

SECTION 1. This Ordinance shall apply to all real property located within the (city/unincorporated area of the county) which is within the very high fire hazard severity zones designated pursuant to Section of the Code of (city/county).

SECTION 2. Definitions.

Accessory Building: Any building used as an accessory to residential, commercial, recreational, industrial, or educational purposes as defined in the latest adopted edition of the California Building Code, Group U, Division 1, Occupancy that requires a building permit.

Building: Any structure used or intended for supporting or sheltering any use or occupancy that is defined in the latest adopted edition of the California Building Code, except Group U, Division 1, Occupancy. For the purposes of this subchapter, building includes mobile homes and manufactured homes, churches and day care facilities.

Dead-End Road: A road that has only one point of vehicular ingress/egress, including cur-de-sacs and looped roads.

Defensible Space: The area within the perimeter of a parcel, development, neighborhood or community where basic wildland fire protection practices and measures are implemented, providing the key point of defense from an approaching wildfire or defense against encroaching wildfires or escaping structure fires. The perimeter as used herein is the area encompassing the parcel or parcels proposed for construction and/or development, excluding the physical structure itself. The area is characterized by the establishment and maintenance of emergency vehicle access, emergency water reserves, street names and building identification, and fuel modification measures.

Development: As defined in Section 66418.1 of the California Government Code.

Driveway: A vehicular access that serves no more than two buildings, with no more than 3 dwelling units on a single parcel, and any number of accessory buildings.

Dwelling Unit: Any building or portion thereof which contains living facilities, including provisions for sleeping, eating, cooking and/or sanitation for not more than one family.

Greenbelts: A facility or land use, designed for a use other than fire protection, which will slow or resist the spread of a wildfire. Includes parking lots, irrigated or landscaped areas, golf courses, parks, playgrounds, maintained vineyards, orchards or annual crops that do not cure in the field.

Hammerhead/T: A roadway that provides a "T" shaped, three-point turnaround space for emergency equipment, being no narrower than the road that serves it.

Hydrant: A valved connection on a water supply/storage system, having at least one 2-1/2 inch outlet, with male American National Fire Hose Screw Threads (NH) used to supply fire apparatus and hoses with water.

Occupancy: The purpose for which a building, or part thereof, is used or intended to be used.

One-Way Road: A minimum of one traffic lane width designed for traffic flow in one direction only.

Roads, Streets, Private Lanes: Vehicular access to more than one parcel; access to any industrial or commercial occupancy, or vehicular access to a single parcel with more than two buildings or four or more dwelling units.

Roadway: Any surface designed, improved, or ordinarily used for vehicle travel.

Same Practical Effect: As used in this ordinance, means an exception or alternative with the capability of applying accepted fire suppression strategies and tactics, and provisions for firefighter safety, including:

- (a) access for emergency fire equipment,
- (b) safe civilian evacuation,
- (c) signing that avoids delays in emergency equipment response,
- (d) available and accessible water to effectively attack fire or defend a structure from fire, and
- (e) fuel modification sufficient for civilian and firefighter safety.

Structure: That which is built or constructed, an edifice or building of any kind or any piece of work artificially built up or composed of parts joined together in some definite manner.

Traffic Lane: The portion of a roadway that provides a single line of vehicle travel.

Turnaround: A roadway, unobstructed by parking, which allows for a safe opposite change of direction for emergency equipment. Design of such area may be a harnmerhead/T or terminus bulb.

Turnouts: A widening in a roadway to allow vehicles to pass.

Vertical Clearance: The minimum specified height of a bridge or overhead projection above the roadway.

SECTION 3. The Uniform Building Code (U.B.C.), (latest adopted edition) as published by the International Conference of Building Officials and the Uniform Fire Code (U.F.C.), (latest adopted edition) as published by the International Conference of Building Officials and Western Fire Chiefs Association, including the appendices thereto, as adopted pursuant to Section _____ of the _____ Code of (city/county), are hereby amended as follows:

I. Add the following, new sub-section to U.B.C. Section _____: Information on Plans and Specifications.

Fire Protection Information on Plans and Specifications in Very High Fire Hazard Severity Zones. In addition to all other relevant provisions of this code and the Uniform Fire Code, appendices and amendments thereto, a vicinity plan, scale no smaller than 1 inch equals 100 feet, shall be submitted to and approved by the fire department prior to the issuance of a grading permit or, if no grading permit is to be issued, prior the issuance of a building permit. The plan shall show the following:

1. All existing and proposed private and public streets on the proposed development property and within 300 feet of the property line of the proposed development, and so identified. with street width dimensions.
2. The location and identification of all existing and proposed fire hydrants within 300 feet of the property line of the proposed development. The water supply shall meet the fire flow requirements as set forth in the latest adopted edition of the U.F.C. and U.B.C., and amendments thereto.
3. The location, occupancy classification, and use of abutting properties.
4. Preliminary fuel modification plans for all improvements in areas containing combustible vegetation shall be submitted to and approved by the (authority having jurisdiction) concurrent with the submittal for approval of any tentative map. Final fuel modification plans shall be submitted to and approved by the (authority having jurisdiction) prior to the issuance of a grading permit. The plans shall consider the criteria set forth in the Fuel

Modification Plan Guidelines for Very High Fire Hazard Severity Zones.

II. Add the following new definition to U.B.C. Section _____: Definitions.

VERY HIGH FIRE HAZARD SEVERITY ZONE. Any geographic area designated pursuant to Government Code Section 51178 to contain the type and condition of vegetation, topography, weather, and structure density to increase the possibility of conflagration fires.

III. Add the following new sub-section to U.F.C. Section _____: Information on Plans and Specifications.
Fire Protection Information on Plans and Specifications in Very High Fire Hazard Severity Zones.

In addition to all other relevant provisions of this code and the Uniform Building Code, appendices and amendments thereto, a vicinity plan, scale no smaller than 1 inch equals 100 feet, shall be submitted to and approved by the fire department prior to the issuance of a grading permit or, if no grading permit is to be issued, prior to the issuance of a building permit. The plan shall show the following:

1. All existing and proposed private and public streets on the proposed development property line within 300 feet of the property line of the proposed development, and so identified with street width dimensions.
2. The location and identification of all existing and proposed fire hydrants within 300 feet of the property line of the proposed development. The water supply shall meet the fire flow requirements as set forth in the latest adopted edition of U.F.C. and U.B.C., and amendments thereto.
3. The location, occupancy classification, and use of abutting properties. Preliminary fuel modification plans for all improvements in areas containing combustible vegetation shall be submitted to and approved by the (authority having jurisdiction) concurrent with the submittal for approval of any tentative map. Final fuel modification plans shall be submitted to and approved by the (authority having jurisdiction) prior to the issuance of a grading permit. The plans shall meet the criteria set forth in the Fuel Modification Plan Guidelines for Very High Fire Hazard Severity Zones.

IV. Add the following new definition to U.F.C. Section _____: Definitions.

VERY HIGH FIRE HAZARD SEVERITY ZONE. Any geographic area designated pursuant to Government Code Section 51178 to contain the type and condition of vegetation, topography, weather, and structure density to increase the possibility of conflagration fires.

V. Add the following paragraph to U.F.C. Section _____: Emergency Access.

Road and street networks, whether public or private, shall provide for safe access for emergency fire equipment and civilian evacuation concurrently, and shall provide unobstructed traffic circulation during a fire emergency consistent with Sections VI through XVI.

VI. Add the following paragraph to U.F.C. Section _____: Roadway Width.

All roads shall be constructed to provide a minimum of two nine-foot traffic lanes providing two-way traffic flow, unless other standards are provided in his ordinance or additional requirements are mandated by local jurisdictions or local subdivision requirements.

VII. Add the following paragraph to U.F.C. Section _____: Roadway Surface.

The surface shall provide unobstructed access to all vehicles, including sedans and fire engines. Surfaces should be established in conformance with local ordinances, and be capable of supporting at least a 40,000 pound load.

VIII. Add the following paragraph to U.F.C. Section _____: Roadway Grades.

The maximum grade for all roads, streets, private lanes and driveways shall not exceed 16 percent.

IX. Add the following paragraph to U.F.C. Section _____: Roadway Radius.

- (a) No roadway shall have a horizontal inside radius of curvature of less than 50 feet and additional surface width of 4 feet shall be added to curves of 50-100 feet radius; 2 feet to those from anything over 100 feet.
- (b) The length of vertical curves in roadways, exclusive of gutters, ditches, and drainage structures designed to hold or divert water, shall be not less than 100 feet.

X. Add the following paragraph to U.F.C. Section _____: Roadway Turnarounds.

Turnarounds are required on driveways and dead-end roads as specified in this article. The minimum turning radius for a turnaround shall be 40 feet from the center line of the road. If a hammerhead/T is used, the top of the "T" shall be a minimum of 60 feet in length.

XI. Add the following paragraph to U.F.C. Section _____: Roadway Turnouts.

Turnouts shall be a minimum of 10 feet wide and 30 feet long with a minimum 25 foot taper on each end.

XII. Add the following paragraph to U.F.C. Section _____: Roadway Structures.

(a) All driveway, road, street, and private land roadway structures shall be constructed to carry at least the maximum load and provide the minimum vertical clearance as required by Vehicle Code Sections 35550, 35750, and 35250.

(b) Appropriate signing, including but not limited to weight or vertical clearance limitations, one-way road or single lane conditions, shall reflect the capability of each bridge.

(c) A bridge with only one traffic lane may be authorized; however, it shall provide for unobstructed visibility from one end to the other and turnouts at both ends.

XIII. Add the following paragraph to U.F.C. Section _____: One-Way Roads.

All one-way roads shall be constructed to provide a minimum of one 10-foot traffic lane. All one-way roads shall connect to a two-lane roadway at both ends, and shall provide access to an area currently zoned for no more than 10 dwelling units. In no case shall it exceed 2640 feet in length. A turnout shall be placed and constructed at approximately the midpoint of each one-way road.

XIV. Add the following paragraph to U.F.C. Section _____: Dead-End Roads.

(a) The maximum length of a dead-end road, including all dead-end roads accessed from that dead-end road, shall not exceed the following cumulative lengths, regardless of the number of parcels served:

1. parcels zoned for less than one acre - 800 feet
2. parcels zoned for 1 acre to 4.99 acres - 1320 feet
3. parcels zoned for 5 acres to 19.99 acres - 2640 feet
4. parcels zoned for 20 acres or larger - 5280 feet

All lengths shall be measured from the edge of the roadway surface at the intersection that begins the road to the end of the road surface at its farthest point. Where a dead-end road crosses areas of differing zoned parcel sizes, requiring different length limits, the shortest allowable length shall apply.

(b) Where parcels are zoned 5 acres or larger, turnarounds shall be provided at a maximum of 1320 foot intervals.

(c) Each dead-end road shall have a turnaround constructed at its terminous.

XV. Add the following paragraph to U.F.C. Section _____: Driveways.

All driveways shall provide a minimum 10 foot traffic lane and unobstructed vertical clearance of 15 feet along its entire length.

(a) Driveways exceeding 150 feet in length, but less than 800 feet in length, shall provide a turnout near the midpoint of the driveway. Where the driveway exceeds 800 feet, turnouts be provided no more than 400 feet apart.

(b) A turnaround shall be provided at all building sites on driveways over 300 feet in length, and shall be within 50 feet of the building.

XVI. Add the following paragraph to U.F.C. Section _____: Gate Entrances.

(a) Gate entrances shall be at least two feet wider than the width of the traffic lane(s) serving that gate.

(b) All gates providing access from a road to a driveway shall be located at least 30 feet from the roadway and shall open to allow a vehicle to stop without obstructing traffic on that road.

(c) Where a one-way road with a single traffic lane provides access to a gated entrance, a 40 foot turning radius shall be used.

XVII. Add the following paragraph to U.F.C. Section _____: Size of Letters, Numbers and Symbols for Street and Road Signs.

Size of letters, numbers, and symbols for street and road signs shall be a minimum 3 inch letter height, 3/8 inch

stroke, reflectorized, contrasting with the background color of the sign.

XVIII. Add the following paragraphs to U.F.C. Section _____: Visibility and Legibility of Street and Road Signs.

Street and road signs shall be visible and legible from both directions of vehicle travel for a distance of at least 100 feet.

XIX. Add the following paragraph to U.F.C. Section _____: Height of Street and Road Signs.

Height of street and road signs shall be uniform (county/city wide), and meet the visibility and legibility standards of this ordinance.

XX. Add the following paragraph to U.F.C. Section _____: Names and Numbers of Street and Road Signs.

Newly constructed or approved public and private roads and streets must be identified by a name or number through a consistent (county/city wide) system that provides for sequenced or patterned numbering and/or nonduplicative naming within each (county/city). All signs shall be mounted and oriented in a uniform manner. This section does not require any entity to rename or renumber existing roads or streets, nor shall a roadway providing access only to a single commercial or industrial occupancy require naming or numbering.

XXI. Add the following paragraph to U.F.C. Section _____: Intersecting Roads, Street, and Private Lanes.

Signs required by this ordinance identifying intersecting roads, streets and private lanes shall be placed at the intersection of those roads, streets, and/or private lanes.

XXII. Add the following paragraph to U.F.C. Section _____: Signs Identifying Traffic Access Limitations.

A sign identifying traffic access or flow limitations, including but not limited to weight or vertical clearance limitations, dead-end road, one-way road or single lane conditions, shall be placed: (a) at the intersection preceding the traffic access limitation, and (b) no more than 100 feet before such traffic access limitation.

XXIII. Add the following paragraph to U.F.C. Section _____: Installation of Road, Street, and Private Lane Signs.

Road, street and private lane signs required by this ordinance shall be installed prior to final acceptance of road improvements.

XIV. Add the following paragraph to U.F.C. Section _____: Addresses for Buildings.

All buildings shall be issued an address by the local jurisdiction which conforms to the jurisdiction's overall address system. Accessory buildings will not be required to have a separate address; however, each dwelling unit within a building shall be separately identified.

XXV. Add the following paragraph to U.F.C. Section _____: Size of Letters, Numbers, and Symbols for Addresses.

Size of letters, numbers and symbols for addresses shall be a minimum 3 inch letter height, 3/8 inch stroke, reflectorized, contrasting with the background color of the sign.

XXVI. Add the following paragraph to U.F.C. Section _____: Installation, Location, and Visibility of Addresses.

(a) All buildings shall have a permanently posted address, which shall be placed at each driveway entrance and visible from both directions of travel along the road. In all cases, the address shall be posted at the beginning of construction and shall be maintained thereafter, and the address shall be visible and legible from the road on which the address is located.

(b) Address signs along one-way roads shall be visible from both the intended direction of travel and the opposite direction.

(c) Where multiple addresses are required at a single driveway, they shall be mounted on a single post.

(d) Where a roadway provides access solely to a single commercial or industrial business. The address sign shall be placed at the nearest road intersection providing access to that site.

Amend Section _____ of the U.F.C.: Enforcement.

When the (authority having jurisdiction) finds in any building or on any premises combustible, hazardous or explosive materials or dangerous accumulations of rubbish; or finds unnecessary accumulations of wastepaper, boxes, shavings or any highly flammable materials which are so situated as to endanger life or property; or finds obstructions to or on fire escapes, stairs, passageways, doors or windows that reasonably tend to interfere with the access and/or operations of the fire department or the egress of the occupants of such building or premises; or finds that this code is being violated, the is authorized to issue orders as (authority having jurisdiction) necessary for the enforcement of the fire prevention laws and ordinances governing the same and for the safeguarding of life and property from fire.

SECTION 4. Enforcement. For purposes of enforcement reference is made to amended Section 103.4.1.1 and Appendix VI-C of the 1994 edition of the Uniform Fire Code which is adopted per Section 3 of this document.

SECTION 5. Reduction of Fire Hazard. Any person who owns, leases, controls, operates, or maintains any dwelling or structure in, upon, or adjoining any mountainous area, forest-covered land, brush-covered land, grass-covered land, or any land that is covered with flammable material, which area or land is within a very high fire hazard severity zone shall at all times do all of the following:

(1) Firebreaks. Maintain around and adjacent to the building or structure a firebreak made by removing and clearing away, for a distance of not less than 30 feet on each side thereof or to the property line, whichever is nearer, all flammable vegetation or other combustible growth. This paragraph does not apply to single specimens of trees, ornamental shrubbery or similar plants that are used as groundcover, if they do not form a means of rapidly transmitting fire from the native growth to any building or structure.

(2) Additional Firebreaks. Maintain around and adjacent to any such building or structure additional fire protection or firebreaks made by removing all brush, flammable vegetation, or combustible growth which is located from 30 feet to 100 feet from any such building or structure or to the property line, whichever is nearer, as may be required by the Fire Chief if he/she finds that, because of extra hazardous condition, a firebreak of only 30 feet around the building or structure is not sufficient to provide reasonable fire safety. Grass and other vegetation located more than 30 feet from the building or structure and less than 18 inches in height above the ground may be maintained where necessary to stabilize the soil and prevent erosion.

(3) Trees. Remove that portion of any tree that extends within 10 feet of the outlet of any chimney or stovepipe.

(4) Dead or Dying Wood. Maintain any tree adjacent to or overhanging any building free of dead or dying wood.

(5) Vegetative Growth. Maintain the roof of any structure free of leaves, needles, or other dead vegetative growth.

(6) Chimney and Stovepipe. Provide and maintain at all times a screen over the outlet of every chimney or stovepipe that is attached to any fireplace, stove, or other device that burns any solid or liquid fuel. The screen shall be constructed of nonflammable material with openings of not more than one-half inch in size.

(7) Setback. All parcels 1 acre and larger shall provide a minimum 30 foot setback for buildings and accessory buildings from all property lines. For parcels less than 1 acre, jurisdictions shall provide for the same practical effect.

(8) Disposal of Flammable Vegetation and Fuels. Disposal, including chipping, burying, burning or removal to a landfill site approved by the local jurisdiction, of flammable vegetation and fuels caused by site development and construction, road and driveway construction, and fuel modification shall be completed prior to completion of road construction or final inspection of a building permits.

Greenbelts. Subdivisions and other developments, which propose greenbelts as a part of the development plan, shall locate said greenbelts strategically as a separation between wildland fuels and structures. The locations shall be approved by the (authority having jurisdiction).

A person is not required under this section to maintain a clearing on any land if that person does not have the legal right to maintain the clearing nor is any person required to enter upon property that is owned by any other person without the consent of the owner of the property.

SECTION _____ : Exceptions to Section 5. (a) Section 5 of this ordinance shall not apply to any land or water area acquired or managed for one or more of the following purposes or uses:

(1) Habitat for endangered or threatened species, or any species that is a candidate for listing as an endangered or threatened species by the state or federal government.

- (2) Land kept in a predominantly natural state as habitat for wildlife, plant, or animal communities.
- (3) Open space lands that are environmentally sensitive parklands.

Other lands having scenic values and declared by the (City Council/Board of Supervisors) of the (city/county) of, or by state or federal law.

(a) This exemption applies whether the land or water area is held in fee title or any lesser interest. This exemption applies to any public agency, any private entity that has dedicated the land or water areas to one or more of those purposes or uses, or any combination of public agencies and private entities making that dedication.

(b) This section shall not be construed to prohibit the use of properly authorized prescribed burning to improve the biological function of land or to assist in the restoration of desired vegetation.

(c) In the event that any lands adjacent to any land or water area described in subdivision (a) are improved such that they are subject to Government Code Section 51182, the obligation to comply with Section 51182 shall be with the person owning, leasing, controlling, operating, or maintaining the occupied dwelling or occupied structure on the improved lands. All maintenance activities and other fire prevention measures required by Section 51182 shall be required only for the improved lands, not the land and water areas described in subdivision (a).

Amend Section _____ of the UBC: Building Standards.

Buildings and structures hereafter constructed, or relocated into Very High Fire Hazard Severity Zones shall, in addition to the requirements of the California Building Code and any other local ordinances, meet the following construction requirements.

(a) Eaves. Eaves shall be protected on the exposed underside by materials approved for one-hour-rated fire-resistive construction. Fascias are required and must be protected on the backside by materials approved for one-hour-rated fire-resistive construction or 2-inch (51 mm) nominal dimension lumber.

(b) Roofs. All new structures, and every existing structure where 50 percent or more of the total area of the existing building is re-roofed within any one year period within a very high fire hazard severity zone shall have at least a Class B roof.

(c) Underfloor Areas. Buildings or structures shall have all underfloor areas enclosed to the ground with exterior walls in accordance with Section (applicable UBC Section).

Exception: Complete enclosure may be omitted where the underside of all exposed floors and all exposed structural columns, beams and supporting walls are protected as required for exterior one-hour-rated fire-resistive construction.

(d) Unenclosed Accessory Structures. Unenclosed accessory structures attached to buildings with habitable spaces and projections, such as decks, shall be of one-hour-rated fire-resistive construction, or constructed with noncombustible materials.

Exception: When 100 feet of defensible space is provided, patio roofs may be constructed of combustible materials not less than 2x4 inch nominal size and arbors or open lattice work sunshades may be constructed of combustible materials not less than 2x2 inch nominal size.

(e) Underfloor Areas (Attached Structure). When the attached structure is located and constructed so that the structure or any portion thereof projects over a descending slope surface, the area below the structure shall have all underfloor areas enclosed to within 6 inches (152 mm) of the ground, with exterior walls in accordance with Section (applicable UBC Section).

(f) Windows. Exterior windows, window walls and skylights shall be tempered glass or multilayered glazed panels.

(g) Doors. Exterior doors, other than vehicular access doors to garages, shall be noncombustible or solid core not less than 1-3/4 inch (45 mm) thick. Windows within doors and glazed doors shall be in accordance with Section (applicable UBC Section).

(h) Attics. Attic ventilation openings, foundation or underfloor vents, or other ventilation openings, foundation or underfloor vents, or other ventilation openings in vertical exterior walls and vents through roofs shall not exceed 144 square inches (0.0929m²) each. Such vents shall be covered with noncombustible corrosion-resistant mesh with openings not to exceed 1/4 inch (6.4 mm).

Attic ventilation openings shall not be located in soffits, in eave overhangs, between rafters at eaves, or in other overhang areas. Gable end and dormer vents shall be located at least 10 feet (3048 mm) from property lines. Underfloor ventilation openings shall be located as close to grade as practical.

(i) Walls. Detached accessory structures located less than 50 feet (15,240 mm) from a building containing

habitable space shall have exterior walls constructed with materials approved for one-hour-rated fire-resistive construction or constructed with noncombustible materials on the exterior side.

(j) Underfloor Areas (Detached Structure). When the detached structure is located and constructed so that the structure or any portion thereof projects over a descending slope surface, the area below the structure shall have all underfloor areas enclosed to within 6 inches (152 mm) of the ground, with exterior walls in accordance with Section (applicable UBC Section)

SECTION_____. Findings. The provisions of this ordinance are reasonably necessary because of the following local climatic, geographical and topographical conditions:

(a) Very high fire hazard severity zones have been identified and adopted by local ordinance pursuant to Government Code Sections 51175 through 51178.

(b) The very high fire hazard severity zones are located in areas which are subject to periodic conditions of high velocity winds and high temperatures with accompanying low humidity.

(c) The climatic conditions described above are further accentuated by the topographical features of the hill and canyon areas, and the presence of highly combustible vegetation in the identified very high fire hazard severity zones.

(d) The conditions described above make these areas nearly inaccessible and operationally difficult for fire suppression and evacuation activities.

These findings are made pursuant to Sections 17958.5 and 17958.7 of the Health and Safety Code.

Appendix J

MODEL ORDINANCE COMPLIANCE CHECKLIST

The following list of requirements is taken directly from the "MODEL ORDINANCE FOR THE DEFENSIBILITY OF SPACE AND STRUCTURES" as developed by the Office of the State Fire Marshal, Fire Engineering Division, as required by Assembly Bill 3819, Chaptered on September 27, 1994, per the following:

The bill would state the legislative finding that space and structure defensibility is essential to diligent fire prevention and would require the State Fire Marshal, in consultation with the Director of Forestry and Fire Protection, by July 1, 1996, to prepare and adopt a model ordinance that provides for comprehensive space and structure defensibility... in very high fire hazard severity zones. It would require the State Fire Marshal to transmit copies of the ordinance to appropriate local agencies and to the director....

STANDARD	MIN. PER AB 3819	NOTES
ROAD STANDARDS FOR FIRE EQUIPMENT ACCESS:		
Width	Two 9' lanes	
Surface	40,000 lb. Load	
Grades	Not to exceed 16%	
Horizontal Inside Radius	No less than 50'	
Vertical Curves	100'	
Turnarounds	Required, 40' from center	
Hammerhead/"T"	Top of "T" 60' long	
Turnouts	10' x 30'	
	25' taper each end	
Roadway Structures (Bridges)	Load and clearance per Vehicle Code Sections 35550, 35750, 35250	
Bridge Signage	Load, clearance, one-way, single lane	
One-way Roads	One 10' lane	
	Must connect to 2 lanes at each end	
	Serve no more than 10 dwellings	
	Not to exceed 2640'	
	Turnout at midpoint	
Dead-end Roads	<i>Not to exceed:</i>	
<1 acre parcels	800'	
1-4.99 acre parcels	1320'	
5-19.99 acre parcels	2640' with turnaround at 1320' interval	
20+ acre parcels	5280' with turnaround at 1320' intervals	
Driveways	10' wide, 15' vertical clearance	

<i>If >150' but <800'</i>	Turnout at midpoint	
<i>If >800'</i>	Every 400'	
<i>If >300'</i>	Turnaround w/in 50' of all building sites	
Gate Entrances	2' wider than lane	
	30' from roadway	
<i>If one-way</i>	40' turning radius	
STANDARDS FOR SIGNING STREETS, ROADS AND BUILDINGS:		
Sign Symbols	3" letter height	
	3/8" stroke	
	Reflectorized	
	Contrasting color	
Visibility	100' both directions	
Height	Uniform	
Names/Numbers	Required	
Intersections	Signs required	
Access Limit Signage	Nearest intersection or 100' before limit	
Sign Installation	Prior to acceptance	
Addresses	Required	
Address Symbols	3' letter height	
	3/8" stroke	
	Contrasting color	
Address Installation	Permanent posting required at all times	
Visibility	Both directions, even if one-way road	
	Multiple addresses on one post	
	If industrial site, post at intersection	
Hydrants and Fire Valves	Must meet minimum flow as set forth in latest UFC/UBC for new construction	
	ID per latest NFPA requirements	
FUEL MODIFICATION STANDARDS:		
Clearance (Structure)	30' on each side or to property line	
Additional Clearance	30'-100' when needed	
Trees	10' from chimney	

Dead or Dying Wood	Remove if overhangs structure	
Accumulated Vegetation	Clear roof	
Chimney and Stovepipe	Screen <1/2" holes	
Setback <i>If >1 acre</i>	30'	
<i>If <1 acre</i>	Same practical effect	
Disposal	Prior to acceptance	
Greenbelts	Locate strategically-must be approved	
INFORMATION ON PLANS AND SPECIFICATIONS:		
Vicinity Plan	No less than 1"=100'	
	300' radius showing all street widths	
	300' radius hydrant plan / min. flow	
	Location, occupancy class & use of abutting properties	
	Preliminary fuel modification plan	
Fire Protection Info for VHFHSZ (per Government Code 51178)	300' radius showing all street widths	
	300' radius hydrant plan / min. flow	
	Location, occupancy class & use of abutting properties	
	Preliminary fuel modification plan	
	Final fuel modification plan	
STRUCTURAL STANDARDS		
Eaves	1 hour fire rated	
	Fascias required, must be backed by 1 hour or 2" lumber	
Roofs	Class B or better	
Underfloor Areas	Enclosed to ground	
<i>Exception</i>	If exposed materials are 1 hour rated	
Unenclosed Accessory Structures	Non-combustible or 1 hour rated	
<i>Exception</i>	If 100' defensible space, patio roofs > 2"x4" or open lattice > 2"x2" is OK	
Underfloor Areas (Attached Structure)	If over a descending slope, enclose within 6" of ground	
Windows	Tempered or multi-layered glass	
Doors	Non-combustible or solid core > 1-3/4"	
Attic Openings	Not to exceed 144 square inches	
	Noncombustible corrosion-resistant	

	mesh < 1/4" holes	
	Not to be in soffits, eave overhangs, etc.	
	Gable/dormer vents 10' from property line	
Walls	Any habitable space must be 1 hour rated	
Underfloor Areas (Detached Structure)	If over a descending slope, enclose within 6" of ground	
MISCELLANEOUS REQUIREMENTS		
Adoption of Zone	Government Codes 51175-51178	
Description of Zone	Climatic conditions	
	Topography	
	Fuels	
	Accessibility	
	Evacuation	
Rubbish Removal	Required-all types	

Appendix K

STATUTES AND REGULATIONS

This appendix has been designed to present only those laws and regulations, or portions thereof, which pertain more or less directly to structural fire prevention and protection in and near the wildlands. As such, this appendix should only be used as a quick field reference. For full and current text, meaning and proper context of laws and regulations, reference should be made to the applicable codes, manuals, directives, etc.

I. STATE LAWS

A. *Government Code*

Section 51175 – Fire Prevention.

The Legislature hereby finds and declares as follows:

(a) Fires are extremely costly, not only to property owners and residents, but also to local agencies. Fires pose a serious threat to the preservation of the public peace, health, or safety. Since fires ignore civil boundaries, it is necessary that cities, counties, special districts, state agencies, and federal agencies work together to bring raging fires under control. Preventive measures are therefore needed to ensure the preservation of the public peace, health, or safety.

(b) The prevention of fires is not a municipal affair, as that term is used in Section 5 of Article XI of the California Constitution, but is instead, a matter of statewide concern. It is the intent of the Legislature that this chapter apply to all local agencies, including, but not limited to, charter cities, charter counties, and charter cities and counties. This subdivision shall not limit the authority of a local agency to impose more restrictive fire and panic safety requirements, as otherwise authorized by law.

(c) It is not the intent of the Legislature in enacting this chapter to limit or restrict the authority of a local agency to impose more restrictive fire and panic safety requirements, as otherwise authorized by law.

Section 51176 – Fire Hazard Classification.

The purpose of this chapter is to classify lands in the state in accordance with whether a very high fire hazard is present so that public officials are able to identify measures that will retard the rate of spread, and reduce the potential intensity, of uncontrolled fires that threaten to destroy resources, life, or property, and to require that those measures be taken.

Section 51177 - Definitions.

As used in this chapter:

(a) "Director" means the Director of Forestry and Fire Protection.

(b) "Very high fire hazard severity zone" means an area designated by the director pursuant to Section 51178 that is not a state responsibility area.

(c) "Local agency" means a city, county, city and county, or district responsible for fire protection within a very high fire hazard severity zone.

(d) "Single specimen tree" means any live tree that stands alone in the landscape so as to be clear of buildings, structures, combustible vegetation, or other trees, and that does not form a means of rapidly transmitting fire from the native growth to any occupied dwelling or structure.

(e) "State responsibility areas" means those areas identified pursuant to Section 4102 of the Public Resources Code.

Section 51178 – Identification of Very High Fire Hazard Severity Zones.

(a) The director shall identify areas in the state as very high fire hazard severity zones based on consistent statewide criteria and based on the severity of fire hazard that is expected to prevail in those areas. Very high fire hazard severity zones shall be based on fuel loading, slope, fire weather, and other relevant factors.

(b) On or before January 1, 1995, the director shall identify areas as very high fire hazard severity zones in the Counties of Alameda, Contra Costa, Los Angeles, Marin, Napa, Orange, Riverside, San Bernardino, San Francisco, San Mateo, Santa Barbara, Santa Clara, Solano, Sonoma, and Ventura. This information shall be transmitted to all local agencies with identified very high fire hazard severity zones within 30 days.

(c) On or before January 1, 1996, the director shall identify areas as very high fire hazard severity zones in all other counties. This information shall be transmitted to all local agencies with identified high fire hazard severity zones within 30 days.

Section 51178.5 – Public Review.

Within 30 days after receiving a transmittal from the director that identifies very high fire hazard severity zones, a local agency shall make the information available for public review. The information shall be presented in a format that is understandable and accessible to the general public, including, but not limited to, maps.

Section 51179 – Designation by Local Agency.

(a) A local agency shall designate, by ordinance, very high fire hazard severity zones in its jurisdiction within 120 days of receiving recommendations from the director pursuant to subdivisions (b) and (c) of Section 51178. A local agency shall be exempt from this requirement if ordinances of the local agency, adopted on or before December 31, 1992, impose standards that are equivalent to, or more restrictive than, the standards imposed by this chapter.

(b) A local agency may, at its discretion, exclude from the requirements of Section 51182 an area identified as a very high fire hazard severity zone by the director within the jurisdiction of the local agency, following a finding supported by substantial evidence in the record that the requirements of Section 51182 are not necessary for effective fire protection within the area.

(c) A local agency may, at its discretion, include areas within the jurisdiction of the local agency, not identified as very high fire hazard severity zones by the director, as very high fire hazard severity zones following a finding supported by substantial evidence in the record that the requirements of Section 51182 are necessary for effective fire protection within the area.

(d) Changes made by a local agency to the recommendations made by the director shall be final and shall not be rebuttable by the director.

(e) The State Fire Marshal shall prepare and adopt a model ordinance that provides for the establishment of very high fire hazard severity zones.

(f) Any ordinance adopted by a local agency pursuant to this section that substantially conforms to the model ordinance of the State Fire Marshal shall be presumed to be in compliance with the requirements of this section.

(g) A local agency shall post a notice at the office of the county recorder, county assessor, and county planning agency identifying the location of the map provided by the director pursuant to Section 51178. If the agency amends the map, pursuant to subdivision (b) or (c) of this section, the notice shall

instead identify the location of the amended map.

Section 51180 – Natural Conditions.

For the purposes of Division 3.6 (commencing with Section 810) of Title 1, vegetation removal or management, undertaken in whole or in part, for fire prevention or suppression purposes shall not be deemed to alter the natural condition of public property. This section shall apply only to natural conditions of public property and shall not limit any liability or immunity that may otherwise exist pursuant to this chapter.

Section 51181 – Periodic Review.

The director shall periodically review the areas in the state identified as very high fire hazard severity zones pursuant to this chapter, and as necessary, shall make recommendations relative to very high fire hazard severity zones. This review shall coincide with the review of state responsibility area lands every five years and, when possible, fall within the time frames for each county's general plan update. Any revision of areas included in a very high fire hazard severity zone shall be made in accordance with Sections 51178 and 51179.

Section 51182 – Vegetation Management.

(a) Any person who owns, leases, controls, operates, or maintains any occupied dwelling or occupied structure in, upon, or adjoining any mountainous area, forest-covered land, brush-covered land, grass-covered land, or any land that is covered with flammable material, which area or land is within a very high fire hazard severity zone designated by the local agency pursuant to Section 51179, shall at all times do all of the following:

(1) Maintain around and adjacent to the dwelling or structure a firebreak made by removing and clearing away, for a distance of not less than 30 feet on each side thereof or to the property line, whichever is nearer, all flammable vegetation or other combustible growth. This paragraph does not apply to single specimens of trees, ornamental shrubbery, or similar plants that are used as ground cover, if they do not form a means of rapidly transmitting fire from the native growth to any dwelling or structure.

(2) Maintain around and adjacent to the occupied dwelling or occupied structure additional fire protection or firebreaks made by removing all brush, flammable vegetation, or combustible growth that is located from 30 feet to 100 feet from the occupied dwelling or occupied structure or to the property line, whichever is nearer, as may be required by the local agency if the local agency finds that, because of extra hazardous conditions, a firebreak of only 30 feet around the occupied dwelling or occupied structure is not sufficient to provide reasonable fire safety. Grass and other vegetation located more than 30 feet from the dwelling or structure and less than 18 inches in height above the ground may be maintained where necessary to stabilize the soil and prevent erosion.

(3) Remove that portion of any trees that extends within 10 feet of the outlet of any chimney or stovepipe.

(4) Maintain any tree adjacent to or overhanging any building free of dead or dying wood.

(5) Maintain the roof of any structure free of leaves, needles, or other dead vegetative growth.

(6) Provide and maintain at all times a screen over the outlet of every chimney or stovepipe that is attached to any fireplace, stove, or other device that burns any solid or liquid fuel. The screen shall be constructed and installed in accordance with the California Building Standards Code.

(b) A person is not required under this section to maintain any clearing on any land if that person does not have the legal right to maintain the clearing, nor is any person required to enter upon or to damage property that is owned by any other person without the consent of the owner of the property.

Section 51183 - Exemptions.

(a) The local agency may exempt from the standards set forth in Section 51182 structures with exteriors constructed entirely of nonflammable materials, or conditioned upon the contents and composition of the structure, and may vary the requirements respecting the removing or clearing away of flammable vegetation or other combustible growth with respect to the area surrounding the structures. In no case shall this subdivision be deemed to authorize a local agency to vary any requirement that is a building standard subject to Section 18930 of the Health and Safety Code, except as otherwise authorized by law.

(b) No exemption or variance shall apply unless and until the occupant thereof, or if there be no occupant, then the owner thereof, files with the local agency a written consent to the inspection of the interior and contents of the structure to ascertain whether the provisions of Section 51182 are complied with at all times.

Section 51183.5 – Natural Hazard Disclosure.

(a) A transferor of real property that is located within a very high fire hazard severity zone, designated pursuant to this chapter, shall disclose to any prospective transferee the fact that the property is located within a very high fire hazard severity zone, and is subject to the requirements of Section 51182.

(b) Disclosure is required pursuant to this section only when one of the following conditions is met:

(1) The transferor, or the transferor's agent, has actual knowledge that the property is within a very high fire hazard severity zone.

(2) A map that includes the property has been provided to the local agency pursuant to Section 51178, and a notice is posted at the offices of the county recorder, county assessor, and county planning agency that identifies the location of the map and any information regarding changes to the map received by the local agency.

(c) In all transactions that are subject to Section 1103 of the Civil Code, the disclosure required by subdivision (a) of this section shall be provided by either of the following means:

(1) The Local Option Real Estate Disclosure Statement as provided in Section 1102.6a of the Civil Code.

(2) The Natural Hazard Disclosure Statement as provided in Section 1103.2 of the Civil Code.

(d) If the map or accompanying information is not of sufficient accuracy or scale that a reasonable person can determine if the subject real property is included in a very high fire hazard zone, the transferor shall mark "Yes" on the Natural Hazard Disclosure Statement. The transferor may mark "No" on the Natural Hazard Disclosure Statement if he or she attaches a report prepared pursuant to subdivision (c) of Section 1103.4 of the Civil Code that verifies the property is not in the hazard zone. Nothing in this subdivision is intended to limit or abridge any existing duty of the transferor or the transferor's agents to exercise reasonable care in making a determination under this subdivision.

(e) Section 1103.13 of the Civil Code shall apply to this section.

(f) The specification of items for disclosure in this section does not limit or abridge any obligation for disclosure created by any other provision of law or that may exist in order to avoid fraud, misrepresentation, or deceit in the transfer transaction.

Section 51184 – Environmental Exceptions.

(a) Section 51182 shall not apply to any land or water area acquired or managed for one or more of the following purposes or uses:

(1) Habitat for endangered or threatened species, or any species that is a candidate for listing as an endangered or threatened species by the state or federal government.

(2) Lands kept in a predominantly natural state as habitat for wildlife, plant, or animal communities.

(3) Open space lands that are environmentally sensitive parklands.

(4) Other lands having scenic values, as declared by the local agency, or by state or federal law.

(b) This exemption applies whether the land or water area is held in fee title or any lesser interest.

This exemption applies to any public agency, any private entity that has dedicated the land or water areas to one or more of those purposes or uses, or any combination of public agencies and private entities making that dedication.

(c) This section shall not be construed to prohibit the use of properly authorized prescribed burning to improve the biological function of land or to assist in the restoration of desired vegetation.

(d) In the event that any lands adjacent to any land or water area described in subdivision (a) are improved such that they are subject to Section 51182, the obligation to comply with Section 51182 shall be with the person owning, leasing, controlling, operating, or maintaining the occupied dwelling or occupied structure on the improved lands. All maintenance activities and other fire prevention measures required by Section 51182 shall be required only for the improved lands, not the land and water areas described in subdivision (a).

Section 51185 – Penalties for Violations.

(a) A violation of Section 51182 is an infraction punishable by a fine of not less than one hundred dollars (\$100) nor more than five hundred dollars (\$500).

(b) If a person is convicted of a second violation of Section 51182 within five years, that person shall be punished by a fine of not less than two hundred fifty dollars (\$250) nor more than five hundred dollars (\$500).

(c) If a person is convicted of a third violation of Section 51182 within five years, that person is guilty of a misdemeanor and shall be punished by a fine of not less than five hundred dollars (\$500).

Section 51186 – Notification of Violation.

The local agency having jurisdiction of property upon which conditions regulated by Section 51182 are being violated shall notify the owner of the property to correct the conditions. If the owner fails to correct the conditions, the local agency may cause the corrections to be made, and the expenses incurred shall become a lien on the property that is the subject of the corrections when recorded in the county recorder's office in the county in which the real property is located. The priority of the lien shall be as of the date of recording. The lien shall contain the legal description of the real property, the assessor's parcel number, and the name of the owner of record as shown on the latest equalized assessment roll.

Section 51187 – Public Nuisance.

Any violation of Section 51182 may be considered a public nuisance pursuant to Section 38773.

Section 51188 – Conflicting Statutes.

In the instance of conflict between this chapter and any provision of state law that allows a regional planning agency to regulate very high fire hazard severity zones, this chapter shall prevail.

Section 51189 – Space and Structure Defensibility.

(a) The Legislature finds and declares that space and structure defensibility is essential to diligent fire prevention. This defensibility extends beyond the vegetation management practices required by this chapter, and includes, but is not limited to, measures that increase the likelihood of a structure to withstand intrusion by fire, such as building design and construction requirements that use fire resistant building

materials, and provide protection of structure projections, including porches, decks, balconies and eaves, and structure openings including attic and eave vents and windows.

(b) No later than July 1, 1996, the State Fire Marshal, in consultation with the Director of Forestry and Fire Protection, shall prepare and adopt a model ordinance that provides for comprehensive space and structure defensibility, including in very high fire severity zones.

(c) Upon adoption of the model ordinances, the State Fire Marshal shall transmit copies of the ordinance to the appropriate local agencies in every jurisdiction that contains a very high fire hazard severity zone, and to the Director of Forestry and Fire Protection.

(d) The State Fire Marshal shall make every feasible effort to obtain funds from federal, state, local, and other appropriate sources to assist in developing and preparing the model ordinance.

B. Health and Safety Code (HSC)

Section 13108.5 - Buildings in Fire Hazard Severity Zones

The State Fire Marshal shall propose, and the State Building Standards Commission shall adopt, amend, and repeal regulations for openings into the attic areas of buildings in those fire hazard severity zones, including very high fire hazard severity zones, designated by the Director of Forestry and Fire Protection pursuant to Article 9 (commencing with Section 4201) of Chapter 1 of Part 2 of Division 4 of the Public Resources Code, and in very high fire hazard severity zones designated by a local agency pursuant to Chapter 6.8 (commencing with Section 51175) of Part 1 of Division 1 of Title 5 of the Government Code.

Section 13132.7 – Roofing Regulations.

(a) Within a very high fire hazard severity zone designated by the Director of Forestry and Fire Protection pursuant to Article 9 (commencing with Section 4201) of Chapter 1 of Part 2 of Division 4 of the Public Resources Code and within a very high hazard severity zone designated by a local agency pursuant to Chapter 6.8 (commencing with Section 51175) of Part 1 of Division 1 of Title 5 of the Government Code, the entire roof covering of every existing structure where more than 50 percent of the total roof area is replaced within any one-year period, every new structure, and any roof covering applied in the alteration, repair, or replacement of the roof of every existing structure, shall be a fire retardant roof covering that is at least class B as defined in the Uniform Building Code, as adopted and amended by the State Building Standards Commission.

(b) In all other areas, the entire roof covering of every existing structure where more than 50 percent of the total roof area is replaced within any one-year period, every new structure, and any roof covering applied in the alteration, repair, or replacement of the roof of every existing structure, shall be a fire retardant roof covering that is at least class C as defined in the Uniform Building Code, as adopted and amended by the State Building Standards Commission.

(c) Notwithstanding subdivision (b), within state responsibility areas classified by the State Board of Forestry and Fire Protection pursuant to Article 3 (commencing with Section 4125) of Chapter 1 of Part 2 of Division 4 of the Public Resources Code, except for those state responsibility areas designated as moderate fire hazard responsibility zones, the entire roof covering of every existing structure where more than 50 percent of the total roof area is replaced within any one-year period, every new structure, and any roof covering applied in the alteration, repair, or replacement of the roof of every existing structure, shall be a fire retardant roof covering that is at least class B as defined in the Uniform Building Code, as adopted and amended by the State Building Standards Commission.

(d) (1) Notwithstanding subdivision (a), (b), or (c), within very high fire hazard severity zones designated by the Director of Forestry and Fire Protection pursuant to Article 9 (commencing with Section 4201) of Chapter 1 of Part 2 of Division 4 of the Public Resources Code or by a local agency pursuant to

Chapter 6.8 (commencing with Section 51175) of Part 1 of Division 1 of Title 5 of the Government Code, the entire roof covering of every existing structure where more than 50 percent of the total roof area is replaced within any one-year period, every new structure, and any roof covering applied in the alteration, repair, or replacement of the roof of every existing structure, shall be a fire retardant roof covering that is at least class A as defined in the Uniform Building Code, as adopted and amended by the State Building Standards Commission.

(2) Paragraph (1) does not apply to any jurisdiction containing a very high fire hazard severity zone if the jurisdiction fulfills both of the following requirements:

(A) Adopts the model ordinance approved by the State Fire Marshal pursuant to Section 51189 of the Government Code or an ordinance that substantially conforms to the model ordinance of the State Fire Marshal.

(B) Transmits, upon adoption, a copy of the ordinance to the State Fire Marshal.

(e) The State Building Standards Commission shall incorporate the requirements set forth in subdivisions (a), (b), and (c) by publishing them as an amendment to the California Building Standards Code in accordance with Chapter 4 (commencing with Section 18935) of Part 2.5 of Division 13.

(f) Nothing in this section shall limit the authority of a city, county, city and county, or fire protection district in establishing more restrictive requirements, in accordance with current law, than those specified in this section.

(g) This section shall not affect the validity of an ordinance, adopted prior to the effective date for the relevant roofing standard specified in subdivisions (a) and (b), by a city, county, city and county, or fire protection district, unless the ordinance mandates a standard that is less stringent than the standards set forth in subdivision (a), in which case the ordinance shall not be valid on or after the effective date for the relevant roofing standard specified in subdivisions (a) and (b).

(h) Any qualified historical building or structure as defined in Section 18955 may, on a case-by-case basis, utilize alternative roof constructions as provided by the State Historical Building Code.

(i) The installer of the roof covering shall provide certification of the roof covering classification, as provided by the manufacturer or supplier, to the building owner and, when requested, to the agency responsible for enforcement of this part. The installer shall also install the roof covering in accordance with the manufacturer's listing.

(j) (1) No wood roofing materials shall be sold in this state unless:

(A) On and after January 1, 1997, the materials have passed at least one year of the 10-year natural weathering test.

(B) On and after January 1, 1998, the materials have passed at least two years of the 10-year natural weathering test.

(C) On and after January 1, 1999, the materials have passed at least three years of the 10-year natural weathering test.

(D) On and after January 1, 2000, the materials have passed at least four years of the 10-year natural weathering test.

(E) On and after January 1, 2001, the materials have passed at least five years of the 10-year natural weathering test.

(2) The 10-year natural weathering test required by this subdivision shall be conducted in accordance with standard 15-2 of the 1994 edition of the Uniform Building Code at a testing facility recognized by the State Fire Marshal.

(k) The Insurance Commissioner shall accept the use of fire retardant wood roofing material that meets the requirements of this section, used in the partial repair or replacement of nonfire retardant wood roofing material, as meeting the requirement in Section 2695.9 of Title 10 of the California Code of Regulations relative to matching replacement items in quality, color, and size.

C. Public Resources Code (PRC)

Section 4202 - Classification of Zones.

The director shall classify lands within state responsibility areas into fire hazard severity zones. Each zone shall embrace relatively homogeneous lands and shall be based on fuel loading, slope, fire weather, and other relevant factors present.

Section 4203 - Designation of Zones and Fire Hazard Ratings.

(a) The director shall, by regulation, designate fire hazard severity zones and assign to each zone a rating reflecting the degree of severity of fire hazard that is expected to prevail in the zone.

(b) No designation of a zone and assignment of a rating shall be adopted by the director until the proposed regulation has been transmitted to the board of supervisors of the county in which the zone is located at least 45 days prior to the adoption of the proposed regulation and a public hearing has been held in that county during that 45-day period.

Section 4204 - Review of Zones and Maps.

The director shall periodically review zones designated and rated pursuant to this article and, as necessary, shall revise zones or their ratings or repeal the designation of zones. Any revision of a zone or its rating or any repeal of a zone shall conform to the requirements of Section 4203. In addition, the revision or repeal of a zone may be petitioned pursuant to Sections 113 40.6 and 11340.7 of the Government Code.

Section 4205 - Report of Legislative Committees.

The Director of Forestry and Fire Protection shall, not later than December 1, 1995, report to the appropriate committees of the Legislature on the impacts of designating very high fire hazard severity zones pursuant to Article 9 (commencing with Section 420 1) of Chapter I of Part 2 of Division 4, and Chapter 6.8 (commencing with Section 51175) of Part I of Division I of Title 5 of the Government Code, including identifying and recommending how to reconcile any disparities between the different mapping programs.

Section 4290 - Adoption of Building Standards within State Responsibility Areas.

(a) The board shall adopt regulations implementing minimum fire safety standards related to defensible space which are applicable to state responsibility area lands under the authority of the department. These regulations apply to the perimeters and access to all residential, commercial, and industrial building construction within state responsibility areas approved after January 1, 199 1. The board may not adopt building standards, as defined in Section 18909 of the Health and Safety Code, under the authority of this section. As an integral part of fire safety standards, the State Fire Marshal has the authority to adopt regulations for roof coverings and openings into the attic areas of buildings specified in Section 13108.5 of the Health and Safety Code. The regulations apply to the placement of mobile homes as defined by National Fire Protection Association standards. These regulations do not apply where an application for a building permit was filed prior to January 1, 199 1, or to parcel or tentative maps or other developments approved prior to January 1, 199 1, if the final map for the tentative map is approved within the time prescribed by the local ordinance. The regulations shall include all of the following:

- (1) Road standards for fire equipment access.
- (2) Standards for signs identifying streets, roads, and buildings.
- (3) Minimum private water supply reserves for emergency fire use.

(4) Fuel breaks and greenbelts.

(b) These regulations do not supersede local regulations which equal or exceed minimum regulations adopted by the state.

Section 4291 - Defensible Space.

Any person that owns, leases, controls, operates, or maintains any building or structure in, upon, or adjoining any mountainous area or forest-covered lands, brush-covered lands, or grass-covered lands, or any land which is covered with flammable material, shall at all times do all of the following:

(a) Maintain around and adjacent to such building or structure a firebreak made by removing and clearing away, for a distance of not less than 30 feet on each side thereof or to the property line, whichever is nearer, all flammable vegetation or other combustible growth. This subdivision does not apply to single specimens of trees, ornamental shrubbery, or similar plants which are used as ground cover, if they do not form a means of rapidly transmitting fire from the native growth to any building or structure.

(b) Maintain around and adjacent to any such building or structure additional fire protection or firebreak made by removing ail brush, flammable vegetation, or combustible growth which is located from 30 feet to 100 feet from such building or structure or to the property line, whichever is nearer, as may be required by the director if he finds that, because of extra hazardous conditions, a firebreak of only 30 feet around such building or structure is not sufficient to provide reasonable fire safety. Grass and other vegetation located more than 30 feet from such building or structure and less than 18 inches in height above the ground may be maintained where necessary to stabilize the soil and prevent erosion.

(c) Remove that portion of any tree which extends within 10 feet of the outlet of any chimney or stovepipe.

(d) Maintain any tree adjacent to or overhanging any building free of dead or dying wood.

(e) Maintain the roof of any structure free of leaves, needles, or other dead vegetative growth.

(f) Provide and maintain at all times a screen over the outlet of every chimney or stovepipe that is attached to any fireplace, stove, or other device that burns any solid or liquid fuel. The screen shall be constructed of nonflammable material with openings of not more than one-half inch in size.

(g) Except as provided in Section 18930 of the Health and Safety Code, the director may adopt regulations exempting structures with exteriors constructed entirely of nonflammable materials, or conditioned upon the contents and composition of same, he may vary the requirements respecting the removing or clearing away of flammable vegetation or other combustible growth with respect to the area surrounding said structures.

No such exemption or variance shall apply unless and until the occupant thereof, or if there be no occupant, then the owner thereof, files with the department, in such form as the director shall prescribe, a written consent to the inspection of the interior and contents of such structure to ascertain whether the provisions hereof and the regulations adopted hereunder are complied with at all times.

Section 4291.1 - Defensible Space; Violation.

(a) Notwithstanding Section 402 1, a violation of Section 4291 is an infraction punishable by a fine of not less than one hundred dollars (\$100), nor more than five hundred dollars (\$500). If a person is convicted of a second violation of Section 4291 within five years, that person shall be punished by a fine of not less than two hundred fifty dollars (\$250), nor more than five hundred dollars (\$500). If a person is convicted of a third violation of Section 4291 within five years, that person is guilty of a misdemeanor and shall be punished by a fine of not less than five hundred dollars (\$500). If a person is convicted of a third violation of Section 4291 within five years, the department may perform or contract for performance of work necessary to comply with Section 4291 and may bill the person convicted for the costs incurred, in which case the person convicted, upon payment of those costs, shall not be required to pay the fine. If a person convicted of a violation of Section 4291 is granted probation, the court shall impose as a term or

condition of probation, in addition to any other term or condition of probation, that the person pay at least the minimum fine prescribed in this section.

(b) If a person convicted of a violation of Section 4291 produces in court verification prior to imposition of a fine by the court, that the condition resulting in the citation no longer exists, the court may reduce the fine imposed for the violation of Section 4291 to fifty dollars (\$50).

D. California Code of Regulations

Section 1270 - SRA Fire Safe Regulations – Title14

These regulations shall be known as the "SRA Fire Safe Regulations," and shall constitute the basic wildland fire protection standards of the California Board of Forestry.

Section 1270.01 - Purpose.

These regulations have been prepared and adopted for the purpose of establishing minimum wildfire protection standards in conjunction with building, construction and developments in SRA. A local jurisdiction may petition the Board for certification pursuant to* section 1270.03. Where Board certification has not been granted, these regulations shall become effective September 1, 1991. The future design and construction of structures, subdivisions and developments in State Responsibility Area (SRA) shall provide for basic emergency access and perimeter wildfire protection measures as specified in the following articles. These measures shall provide for emergency access; signing and building numbering; private water supply reserves for emergency fire use; and vegetation modification. The fire protection standards which follow shall specify the minimums for such measures.

Section 1270.02 - Scope.

These regulations do not apply to existing structures, roads, streets and private lanes or facilities. These regulations shall apply as appropriate to all construction within SRA approved after January 1, 1991. Affected activities include but are not limited to:

- (a) Permitting or approval of new parcels, excluding lot line adjustments as specified in Government Code (GC) section 66412(d).
- (b) application for a building permit for new construction, not relating to an existing structure,
- (c) application for a use permit,
- (d) the siting of manufactured homes (manufactured homes are as defined by the National Fire Protection Association, National Fire Code, section 501A, Standard for Fire Safety Criteria for Manufactured Home Installations, Sites and Communities, chapter 1, section 1-2, Definitions, page 4, 1987 edition and Health and Safety Code sections 18007, 18008, and 19971).
- (e) road construction, including construction of a road that does not currently exist, or extension of an existing road.

Section 1270.03 - Local Ordinances.

Nothing contained in these regulations shall be considered as abrogating the provisions of any ordinance, rule or regulations of any state or local jurisdiction providing such ordinance, rule, regulation or general plan element is equal to or more stringent than these minimum standards. The Board may certify local ordinances as equaling or exceeding these regulations when they provide the same practical effect.

Section 1270.04 - Provisions for Application of These Regulations

This subchapter shall be applied as follows:

(a) local jurisdictions shall provide the Director with notice of applications for building permits, tentative parcel maps, tentative maps, and use permits for construction or development within SRA.

(b) the Director shall review and make fire protection recommendations on applicable construction or development permits or maps provided by the local jurisdiction.

(c) the local jurisdiction shall ensure that the applicable sections of this subchapter become a condition of approval of any applicable construction or development permit or map.

Section 1270.05 - Inspection Authority.

(a) Inspection shall be made pursuant to section 1270.06 by:

(1) the Director, or

(2) local jurisdictions that have assumed state fire protection responsibility on SRA lands, or

(3) local jurisdictions where these regulations have been implemented through that jurisdiction's building permit or subdivision approval process.

(b) Reports of violations shall be provided to the CDF Ranger Unit headquarters that administers SRA fire protection in that county.

Section 1270.06 - Inspections.

The inspection authority may inspect for compliance with these regulations. When inspections are conducted, they should occur prior to: the issuance of the use permit; certificate of occupancy; the recordation of the parcel map or final map; the filing of a notice of completion; or the final inspection of any project or building permit.

Section 1270.07 - Exceptions to Standards.

Upon request by the applicant, exceptions to standards within this subchapter and mitigated practices may be allowed by the inspection authority, where the exception provides the same overall practical effect as these regulations towards providing defensible space.

Section 1270.08 - Requests for Exceptions.

Requests for an exception shall be made in writing to the inspection authority by the applicant or the applicant's authorized representative. The request shall state the specific section(s) for which an exception is requested, material facts supporting the contention of the applicant, the details of the exception or mitigating measure proposed, and a map showing the proposed location and siting of the exception or mitigation measure.

Section 1270.09 - Appeals.

Where an exception is not granted by the inspection authority, the applicant may appeal such denial to the local jurisdiction. The local jurisdiction may establish or utilize an appeal process consistent with existing local building or planning department appeal processes.

Before the local jurisdiction makes a determination on an appeal, the inspection authority shall be consulted and shall provide to that local jurisdiction documentation outlining the effects of the requested exception on wildland fire protection.

If an appeal is granted, the local jurisdiction shall make findings that the decision meets the intent of providing defensible space consistent with these regulations. Such findings shall include a statement of

reasons for the decision. A written copy of these findings shall be provided to the CDF Ranger Unit headquarters that administers SRA fire protection in that county.

Section 1271.00 - Definitions.

Accessory building: Any building used as an accessory to residential, commercial, recreational, industrial, or educational purposes as defined in the California Building Code ...

Agriculture: Land used for agricultural purposes as defined in a local jurisdiction's zoning ordinances.

Building: Any structure used or intended for supporting or sheltering any use or occupancy that is defined in the California Building Code ... For the purposes of this subchapter, building includes mobile homes and manufactured homes, churches, and day care facilities.

CDF: California Department of Forestry and Fire Protection.

Dead-end road: A road that has only one point of vehicular ingress/egress, including cul-de-sacs and looped roads.

Defensible space: The area within the perimeter of a parcel, development, neighborhood or community where basic wildland fire protection practices and measures are implemented, providing the key point of defense from an approaching wildfire or defense against encroaching wildfires or escaping structure fires. The perimeter as used in this regulation is the area encompassing the parcel or parcels proposed for construction and/or development, excluding the physical structure itself. The area is characterized by the establishment and maintenance of emergency vehicle access, emergency water reserves, street names and building identification, and fuel modification measures.

Development: As defined in section 66418.1 of the California Government Code.

Director: Director of the Department of Forestry and Fire Protection or his/her designee.

Driveway: A vehicular access that serves no more than two buildings, with no more than 3 dwelling units on a single parcel, and any number of accessory buildings.

Dwelling unit: Any building or portion thereof which contains living facilities, including provisions for sleeping, eating, cooking and/or sanitation for not more than one family.

Exception: An alternative to the specified standard requested by the applicant that may be necessary due to health, safety, environmental conditions, physical site limitations or other limiting conditions such as recorded historical sites, that provides mitigation of the problem.

Fire valve: see hydrant.

Fuel modification area: An area where the volume of flammable vegetation has been reduced, providing reduced fire intensity and duration.

Greenbelt: A facility or land use, designed for a use other than fire protection, which will slow or resist the spread of a wildfire. Includes parking lots, irrigated or landscaped areas, golf courses, parks playgrounds, maintained vineyards, orchards or annual crops that do not cure in the field.

Hammerhead/T: A roadway that provides a "T" shaped, three-point turnaround space for emergency equipment, being no narrower than the road that serves it.

Hydrant: A valved connection on a water supply/storage system, having at least one 2 1/2 inch outlet, with male American National Fire Hose Screw Threads (NH) used to supply fire apparatus and hoses with water.

Local Jurisdiction: Any county, city/county agency or department, or any locally authorized district that issues or approves building permits, use permits, tentative maps or tentative parcel maps, or has authority to regulate development and construction activity.

Occupancy: The purpose for which a building, or part thereof, is used or intended to be used.

One-way road: A minimum of one traffic lane width designed for traffic flow in one direction only.

Roads, streets, private lanes: Vehicular access to more than one parcel; access to any industrial or commercial occupancy; or vehicular access to a single parcel with more than two buildings or four or more dwelling units.

Roadway: Any surface designed, improved, or ordinarily used for vehicle travel.

Roadway structures: Bridges, culverts, and other appurtenant structures which supplement the roadway bed or shoulders.

Same Practical Effect: As used in this subchapter, means an exception or alternative with the capability of applying accepted wildland fire suppression strategies and tactics, and provisions for fire fighter safety, including:

- (a) access for emergency wildland fire equipment,
- (b) safe civilian evacuation,
- (c) signing that avoids delays in emergency equipment response,
- (d) available and accessible water to effectively attack wildfire or defend a structure from wildfire,

and

- (e) fuel modification sufficient for civilian and fire fighter safety.

Shoulder: Roadbed or surface adjacent to the traffic lane.

State Board of Forestry (SBOF): ~ A nine member board, appointed by the Governor, which is responsible for developing the general forest policy of the state, for determining the guidance policies of the Department of Forestry and Fire Protection, and for representing the state's interest in federal land in California.

State Responsibility Area (SRA): As defined in Public Resources Code sections 4126-4127; and the California Code of Regulations, title 14, division 1.5, chapter 7, article 1, sections 1220-1220.5.

Structure: That which is built or constructed, an edifice or building of any kind, or any piece of work artificially built up or composed of parts joined together in some definite manner.

Subdivision: As defined in section 66424 of the Government Code.

Traffic lane: The portion of a roadway that provides a single line of vehicle travel.

Turnaround: A roadway, unobstructed by parking, which allows for a safe opposite change of direction for emergency equipment. Design of such area may be a hammerhead/T or terminus bulb.

Turnouts: A widening in a roadway to allow vehicles to pass.

Vertical clearance: The minimum specified height of a bridge or overhead projection above the roadway.

Wildfire: As defined in Public Resources Code sections 4103 and 4104.

Section 1272.00 - Maintenance of Defensible Space Measures.

To ensure continued maintenance of properties in conformance with these standards and measures and to assure continued availability, access, and utilization of the defensible space provided for in these standards during a wildfire, provisions for annual maintenance shall be included in the development plans and/or shall be provided as a condition of the permit, parcel or map approval.

Section 1273.00 - Emergency Access - Intent.

Road and street networks, whether public or private, unless exempted under section 1270.02(e), shall provide for safe access for emergency wildland fire equipment and civilian evacuation concurrently, and shall provide unobstructed traffic circulation during a wildfire emergency consistent with sections 1273.00 through 1273.11.

Section 1273.01 - Road Width.

All roads shall be constructed to provide a minimum of two nine-foot traffic lanes providing two-way traffic flow, unless other standards are provided in this article, or additional requirements are mandated by local jurisdictions or local subdivision requirements.

Section 1273.02 - Roadway Surface.

The surface shall provide unobstructed access to conventional drive vehicles, including sedans and fire engines. Surfaces should be established in conformance with local ordinances, and be capable of supporting a 40,000 pound load.

Section 1273.03 - Roadway Grades.

The grade for all roads, streets, private lanes and driveways shall not exceed 16 percent.

Section 1273.04 - Roadway Radius.

(a) No roadway shall have a horizontal inside radius of curvature of less than 50 feet and additional surface width of 4 feet shall be added to curves of 50- 100 feet radius; 2 feet to those from 100-200 feet.

(b) The length of vertical curves in roadways, exclusive of gutters, ditches, and drainage structures designed to hold or divert water, shall be not less than 100 feet.

Section 1273.05 - Roadway Turnarounds.

Turnarounds are required on driveways and dead-end roads as specified in this article. The minimum turning radius for a turnaround shall be 40 feet from the center line of the road. If a hammerhead/T is used, the top of the "T" shall be a minimum of 60 feet in length.

Section 1273.06 - Roadway Turnouts.

Turnouts shall be a minimum of 10 feet wide and 30 feet long with a minimum 25 foot taper on each end.

Section 1273.07 - Roadway Structures.

(a) All driveway, road, street, and private lane roadway structures shall be constructed to carry at least the maximum load and provide the minimum vertical clearance as required by Vehicle Code sections 35550, 35750, and 35250.

(b) Appropriate signing, including but not limited to weight or vertical clearance limitations, one-way road or single land conditions, shall reflect the capability of each bridge.

(c) A bridge with only one traffic lane may be authorized by the local jurisdiction; however, it shall provide for unobstructed visibility from one end to the other and turnouts at both ends.

Section 1273.08 - One-way Roads.

All one-way roads shall be constructed to provide a minimum of one 10-foot traffic lane. The local jurisdiction may approve one-way roads. All one-way roads shall connect to a two-lane roadway at both ends, and shall provide access to an area currently zoned for no more than 10 dwelling units. In no case, shall it exceed 2640 feet in length. A turnout shall be placed and constructed at approximately the midpoint of each one-way road.

Section 1273.09 - Dead-End Roads.

(a) The maximum length of a dead-end road, including all dead-end roads accessed from the dead-end road, shall not exceed the following cumulative lengths, regardless of the number of parcels served:

parcels zoned for less than one acre - 800 feet

parcels zoned for 1 acre to 4.99 acres - 1320 feet
parcels zoned for 5 acres to 19.99 acres - 2640 feet
parcels zoned for 20 acres or larger - 5280 feet

All lengths shall be measured from the edge of the roadway surface at the intersection that begins the road to the end of the road surface at its farthest point. Where a dead-end road crosses areas of differing zoned parcel sizes, requiring different length limits, the shortest allowable length shall apply.

(b) Where parcels are zoned 5 acres or larger, turnarounds shall be provided at a maximum of 1320 foot intervals.

(c) Each dead-end road shall have a turnaround constructed at its terminus.

Section 1273.10 -Driveways.

All driveways shall provide a minimum 10 foot traffic lane and unobstructed vertical clearance of 15 feet along its entire length.

(a) Driveways exceeding 150 feet in length, but less than 800 feet in length, shall provide a turnout near the midpoint of the driveway. Where the driveway exceeds 800 feet, turnouts shall be provided no more than 400 feet apart.

(b) A turnaround shall be provided at all buildings sites on driveways over 300 feet in length, and shall be within 50 feet of the building.

Section 1273.11 - Gate Entrances.

(a) Gate entrances shall be at least two feet wider than the width of the traffic lane(s) serving that gate.

(b) All gates providing access from a road to a driveway shall be located at least 30 feet from the roadway and shall open to allow a vehicle to stop without obstructing traffic on that road.

(c) Where a one-way road with a single traffic lane provides access to a gated entrance, a 40 foot turning radius shall be used.

Section 1274.00 - Signing and Building Numbering - Intent

To facilitate locating a fire and to avoid delays in response, all newly constructed or approved roads, street, and buildings shall be designated by names or numbers, posted on signs clearly visible and legible from the roadway. This section shall not restrict the size of letters or numbers appearing on street signs for other purposes.

Section 1274.01 - Size of Letters, Numbers and Symbols for Street and Road Signs

Size of letters, numbers, and symbols for street and road signs shall be a minimum 3 inch letter height, 3/8 inch stroke, reflectorized, contrasting with the background color of the sign.

Section 1274.02 - Visibility and Legibility of Street and Road Signs

Street and road signs shall be visible and legible from both directions of vehicle travel for a distance of at least 100 feet.

Section 1274.03 - Height of Street and Road Signs.

Height of street and road signs shall be uniform county wide, and meet the visibility and legibility standards of this article.

Section 1274.04 - Names and Numbers on Street and Road Signs

Newly constructed or approved public and private roads and streets must be identified by name or number through a consistent county-wide system that provides for sequenced or patterned numbering and/or non-duplicating naming within each county. All signs shall be mounted and oriented in a uniform manner. This section does not require any entity to rename or renumber existing roads or streets, nor shall a roadway providing access only to a single commercial or industrial occupancy require naming or numbering.

Section 1274.05 - Intersecting Roads, Streets and Private Lanes.

Signs required by this article identifying intersecting roads, streets and private lanes shall be placed at the intersection of those roads, streets, and/or private lanes.

Section 1274.06 - Signs Identifying Traffic Access Limitations.

A sign identifying traffic access or flow limitations, including but not limited to weight or vertical clearance limitations, dead-end road, one-way road or single lane conditions, shall be placed:

- (a) at the intersection preceding the traffic access limitation, and
- (b) no more than 100 feet before such traffic access limitation.

Section 1274.07 - Installation of Road, Street and Private Lane Signs

Road, street and private lane signs required by this article shall be installed prior to final acceptance by the local jurisdiction of road improvements.

Section 1274.08 - Addresses for Buildings

All buildings shall be issued an address by the local jurisdiction which conforms to that jurisdiction's overall address system. Accessory buildings will not be required to have a separate address; however, each dwelling unit within a building shall be separately identified.

Section 1274.09 - Size of Letters, Numbers and Symbols for Addresses.

Size of letters, numbers and symbols for addresses shall be a minimum 3 inch letter height, 3/8 inch stroke, reflectorized, contrasting with the background color of the sign.

Section 1274.10 - Installation, Location and Visibility of Addresses.

- (a) All buildings shall have a permanently posted address, which shall be placed at each driveway entrance and visible from both directions of travel along the road. In all cases, the address shall be posted at the beginning of construction and shall be maintained thereafter, and the address shall be visible and legible for the road on which the address is located.
- (b) Address signs along on-way roads shall be visible from both the intended direction of travel and the opposite direction.
- (c) Where multiple addresses are required at a single driveway, they shall be mounted on a single post.
- (d) Where a roadway provides access solely to a single commercial or industrial business, the address sign shall be placed at the nearest road intersection providing access to that site.

Section 1275.00 - Emergency Water Standards - Intent.

Emergency water for wildfire protection shall be available and accessible in quantities and locations specified in the statute and these regulations, in order to attack a wildfire or defend property from a wildfire.

Such emergency water may be provided in a fire agency mobile water tender, or naturally occurring or man-made containment structure, as long as the specified quantity is immediately available.

Section 1275.01 - Application.

The provisions of this article shall apply when new parcels are approved by a local jurisdiction. The emergency water system shall be available on-site prior to the completion of road construction, where a community water system is approved, or prior to the completion of building construction, where an individual system is approved.

Section 1275.10 - General Standards.

Water systems that meet or exceed the standards specified in Public Utilities Commission of California (PUC) revised General Order # 103, Adopted June 12, 1956 (Corrected September 7, 1983, Decision 83-09-001), section VIII Fire Protection Standards and other applicable sections relating to fire protection water delivery systems, static water systems equaling or exceeding the National Fire Protection Association (NFPA) Standard 123 1, "Standard on Water Supplies for Suburban and Rural Fire Fighting," 1989 Edition, or mobile water systems that meet the Insurance Services Office (ISO) Rural Class 8, 2nd Edition 3-80, standard shall be accepted as meeting the requirements of this article. These documents are available at CDF Ranger Unit Headquarters.

Nothing in this article prohibits the combined storage of emergency wildfire and structural firefighting water supplies unless so prohibited by local ordinance or specified by the local fire agency.

Where freeze protection is required by local jurisdictions, such protection measures shall be provided.

Section 1275.15 - Hydrant/Fire Valve.

(a) The hydrant or fire valve shall be 18 inches above grade, 8 feet from flammable vegetation, no closer than 4 feet nor farther than 12 feet from a roadway, and in a location where fire apparatus using it will not block the roadway.

The hydrant serving any building shall:

(1) be not less than 50 feet nor more than 1/2 mile by road from the building it is to serve, and
(2) be located at a turnout or turnaround, along the driveway to that building or along the road that intersects with that driveway.

(b) The hydrant head shall be brass with 2 1/2 inch National Hose male thread with cap for pressure and gravity flow systems and 4 1/2 inch draft systems. Such hydrants shall be wet or dry barrel as required by the delivery system. They shall have suitable crash protection as required by the local jurisdiction.

Section 1275.20 - Signing of Water Sources.

Each hydrant/fire valve or access to water shall be identified as follows:

(a) if located along a driveway, a reflectorized blue marker, with a minimum dimension of 3 inches shall be located on the driveway address sign and mounted on a fire retardant post, or

(b) if located along a street or road,

(1) a reflectorized blue marker, with a minimum dimension of 3 inches, shall be mounted on a fire

retardant post. The sign post shall be within 3 feet of said hydrant/fire valve, with the sign no less than 3 feet nor greater than 5 feet above ground, in a horizontal position and visible from the driveway, or

(2) as specified in the State Fire Marshal's Guidelines for Fire Hydrant Markings Along State Highways and Freeways, May 1988.

Section 1276.00 - Fuel Modification Standards - Intent.

To reduce the intensity of a wildfire by reducing the volume and density of flammable vegetation, the strategic siting of fuel modification and greenbelts shall provide

(1) increased safety for emergency fire equipment and evacuating civilians; and

(2) a point of attack or defense from a wildfire.

Section 1276.01 - Setback for Structure Defensible Space.

(a) All parcels I acre and larger shall provide a minimum 30 foot setback for buildings and accessory buildings from all property lines and/or the center of a road.

(b) For parcels less than I acre, local jurisdictions shall provide for the same practical effect.

Section 1276.02 - Disposal of Flammable Vegetation and Fuels.

Disposal, including chipping, burying, burning or removal to a landfill site approved by the local jurisdiction, of flammable vegetation and fuels caused by site development and construction, road and driveway construction, and fuel modification shall be completed prior to completion of road construction or final inspection of a building permit.

Section 1276.03 - Greenbelts.

Subdivisions and other developments, which propose greenbelts as a part of the development plan, shall located said greenbelts strategically, as a separation between wildland fuels and structures. The locations shall be approved by the inspection authority.

Section 1280 - Fire Hazard Severity Zones

The fire hazard severity zones and the rating reflecting the degree of severity of fire hazard that is expected to prevail in those zones, shall be designated by the Director and delineated on a series of maps on file in the Sacramento Office of the Department of Forestry, 1416 Ninth Street, Room 1653- 10. The maps are entitled "Maps of Fire Hazard Severity Zones in the State Responsibility Area of California," dated August 1984.

E. Civil Code

Section 1103 – Natural Hazard Disclosure.

(a) Except as provided in Section 1103.2, this article applies to any transfer by sale, exchange, installment land sale contract, as defined in Section 2985, lease with an option to purchase, any other option to purchase, or ground lease coupled with improvements, of any real property described in subdivision (c), or residential stock cooperative, improved with or consisting of not less than one nor more than four dwelling units.

(b) Except as provided in Section 1103.2, this article shall apply to a resale transaction entered into on or after January 1, 2000, for a manufactured home, as defined in Section 18007 of the Health and

Safety Code, that is classified as personal property intended for use as a residence, or a mobilehome, as defined in Section 18008 of the Health and Safety Code, that is classified as personal property intended for use as a residence, if the real property on which the manufactured home or mobilehome is located is real property described in subdivision (c).

(c) This article shall apply to the transactions described in subdivisions (a) and (b) only if the transferor or his or her agent are required by one or more of the following to disclose the property's location within a hazard zone:

(3) A transferor of real property that is located within a very high fire hazard severity zone, designated pursuant to Section 51178 of the [Government] Code, shall disclose to any prospective transferee the fact that the property is located within a very high fire hazard severity zone and is subject to the requirements of Section 51182 if either:

(A) The transferor, or the transferor's agent, has actual knowledge that the property is within a very high fire hazard severity zone.

(B) A map that includes the property has been provided to the local agency pursuant to Section 51178 of the [Government] Code and a notice has been posted at the offices of the county recorder, county assessor, and county planning agency that identifies the location of the map and any information regarding changes to the map received by the local agency.

(6) A transferor of real property that is located within a state responsibility area determined by the board, pursuant to Section 4125 of the Public Resources Code, shall disclose to any prospective transferee the fact that the property is located within a wildland area that may contain substantial forest fire risks and hazards and is subject to the requirements of Section 4291 if either:

(A) The transferor, or the transferor's agent, has actual knowledge that the property is within a wildland fire zone.

(B) A map that includes the property has been provided to the city or county pursuant to Section 4125 of the Public Resources Code and a notice has been posted at the offices of the county recorder, county assessor, and county planning agency that identifies the location of the map and any information regarding changes to the map received by the county.

(d) Any waiver of the requirements of this article is void as against public policy.

Section 1103.1 - Exceptions.

(a) This article does not apply to the following transfers:

(1) Transfers pursuant to court order, including, but not limited to, transfers ordered by a probate court in administration of an estate, transfers pursuant to a writ of execution, transfers by any foreclosure sale, transfers by a trustee in bankruptcy, transfers by eminent domain, and transfers resulting from a decree for specific performance.

(2) Transfers to a mortgagee by a mortgagor or successor in interest who is in default, transfers to a beneficiary of a deed of trust by a trustor or successor in interest who is in default, transfers by any foreclosure sale after default, transfers by any foreclosure sale after default in an obligation secured by a mortgage, transfers by a sale under a power of sale or any foreclosure sale under a decree of foreclosure after default in an obligation secured by a deed of trust or secured by any other instrument containing a power of sale, or transfers by a mortgagee or a beneficiary under a deed of trust who has acquired the real property at a sale conducted pursuant to a power of sale under a mortgage or deed of trust or a sale pursuant to a decree of foreclosure or has acquired the real property by a deed in lieu of foreclosure.

(3) Transfers by a fiduciary in the course of the administration of a decedent's estate, guardianship, conservatorship, or trust.

(4) Transfers from one coowner to one or more other coowners.

(5) Transfers made to a spouse, or to a person or persons in the lineal line of consanguinity of one or more of the transferors.

(6) Transfers between spouses resulting from a judgment of dissolution of marriage or of legal separation of the parties or from a property settlement agreement incidental to that judgment.

(7) Transfers by the Controller in the course of administering Chapter 7 (commencing with Section 1500) of Title 10 of Part 3 of the Code of Civil Procedure.

(8) Transfers under Chapter 7 (commencing with Section 3691) or Chapter 8 (commencing with Section 3771) of Part 6 of Division 1 of the Revenue and Taxation Code.

(9) Transfers or exchanges to or from any governmental entity.

(b) Transfers not subject to this article may be subject to other disclosure requirements, including those under Sections 8589.3, 8589.4, and 51183.5 of the Government Code and Sections 2621.9, 2694, and 4136 of the Public Resources Code. In transfers not subject to this article, agents may make required disclosures in a separate writing.

Section 1103.2 – Natural Hazard Disclosure Statement.

(a) The disclosures required by this article are set forth in, and shall be made on a copy of, the following Natural Hazard Disclosure Statement:

NATURAL HAZARD DISCLOSURE STATEMENT

This statement applies to the following property: _____

The transferor and his or her agent(s) disclose the following information with the knowledge that even though this is not a warranty, prospective transferees may rely on this information in deciding whether and on what terms to purchase the subject property.

Transferor hereby authorizes any agent(s) representing any principal(s) in this action to provide a copy of this statement to any person or entity in connection with any actual or anticipated sale of the property.

The following are representations made by the transferor and his or her agent(s) based on their knowledge and maps drawn by the state and federal governments. This information is a disclosure and is not intended to be part of any contract between the transferee and transferor.

THIS REAL PROPERTY LIES WITHIN THE FOLLOWING HAZARDOUS AREA(S):

A SPECIAL FLOOD HAZARD AREA (Any type Zone "A" or "V") designated by the Federal Emergency Management Agency.

Yes _____ No _____ Do not know and information not available from local jurisdiction _____

AN AREA OF POTENTIAL FLOODING shown on a dam failure inundation map pursuant to Section 8589.5 of the Government Code.

Yes _____ No _____ Do not know and information not available from local jurisdiction _____

A VERY HIGH FIRE HAZARD SEVERITY ZONE pursuant to Section 51178 or 51179 of the Government Code. The owner of this property is subject to the maintenance requirements of Section 51182 of the Government Code.

Yes _____ No _____

A WILDLAND AREA THAT MAY CONTAIN SUBSTANTIAL FOREST FIRE RISKS AND HAZARDS pursuant to Section 4125 of the Public Resources Code. The owner of this property is subject to the maintenance requirements of Section 4291 of the Public Resources Code. Additionally, it is not the state's responsibility to provide fire protection services to any building or structure located within the wildlands unless the Department of Forestry and Fire Protection has entered into a cooperative agreement with a local agency for those purposes pursuant to Section 4142 of the Public Resources Code.

Yes _____ No _____

AN EARTHQUAKE FAULT ZONE pursuant to Section 2622 of the Public Resources Code.

Yes _____ No _____

A SEISMIC HAZARD ZONE pursuant to Section 2696 of the Public Resources Code.

Yes (Landslide Zone) _____ Yes (Liquefaction Zone) _____ No _____

Map not yet released by state _____

THESE HAZARDS MAY LIMIT YOUR ABILITY TO DEVELOP THE REAL PROPERTY, TO OBTAIN INSURANCE, OR TO RECEIVE ASSISTANCE AFTER A DISASTER. THE MAPS ON WHICH THESE DISCLOSURES ARE BASED ESTIMATE WHERE NATURAL HAZARDS EXIST. THEY ARE NOT DEFINITIVE INDICATORS OF WHETHER OR NOT A PROPERTY WILL BE AFFECTED BY A NATURAL DISASTER. TRANSFEREE(S) AND TRANSFEROR(S) MAY WISH TO OBTAIN PROFESSIONAL ADVICE REGARDING THOSE HAZARDS AND OTHER HAZARDS THAT MAY AFFECT THE PROPERTY.

Transferor represents that the information herein is true and correct to the best of the transferor's knowledge as of the date signed by the transferor.

Signature of Transferor _____ Date _____

Agent represents that the information herein is true and correct to the best of the agent's knowledge as of the date signed by the agent.

Signature of Agent _____ Date _____

Signature of Agent _____ Date _____

Transferee represents that he or she has read and understands this document.

Signature of Transferee _____ Date _____

(b) If an earthquake fault zone, seismic hazard zone, very high fire hazard severity zone, or wildland fire area map or accompanying information is not of sufficient accuracy or scale that a reasonable person can determine if the subject real property is included in a natural hazard area, the transferor or transferor's agent shall mark "Yes" on the Natural Hazard Disclosure Statement. The transferor or transferor's agent may mark "No" on the Natural Hazard Disclosure Statement if he or she attaches a

report prepared pursuant to subdivision (c) of Section 1103.4 that verifies the property is not in the hazard zone. Nothing in this subdivision is intended to limit or abridge any existing duty of the transferor or the transferor's agents to exercise reasonable care in making a determination under this subdivision.

(e) The disclosure required pursuant to this article may be provided by the transferor and the transferor's agent in the Local Option Real Estate Disclosure Statement described in Section 1102.6a, provided that the Local Option Real Estate Disclosure Statement includes substantially the same information and substantially the same warnings that are required by this section.

(f) The disclosure required by this article is only a disclosure between the transferor, the transferor's agents, and the transferee, and shall not be used by any other party, including, but not limited to, insurance companies, lenders, or governmental agencies, for any purpose.

(g) In any transaction in which a transferor has accepted, prior to June 1, 1998, an offer to purchase, the transferor, or his or her agent, shall be deemed to have complied with the requirement of subdivision (a) if the transferor or agent delivers to the prospective transferee a statement that includes substantially the same information and warning as the Natural Hazard Disclosure Statement.

Section 1103.3 – Disclosure Terms.

(a) The transferor of any real property subject to this article shall deliver to the prospective transferee the written statement required by this article, as follows:

(1) In the case of a sale, as soon as practicable before transfer of title.

(2) In the case of transfer by a real property sales contract, as defined in Section 2985, or by a lease together with an option to purchase, or a ground lease coupled with improvements, as soon as practicable before execution of the contract. For the purpose of this subdivision, "execution" means the making or acceptance of an offer.

(b) The transferor shall indicate compliance with this article either on the receipt for deposit, the real property sales contract, the lease, any addendum attached thereto, or on a separate document.

(c) If any disclosure, or any material amendment of any disclosure, required to be made pursuant to this article is delivered after the execution of an offer to purchase, the transferee shall have three days after delivery in person or five days after delivery by deposit in the mail to terminate his or her offer by delivery of a written notice of termination to the transferor or the transferor's agent.

Section 1103.4 – Errors and Omissions.

(a) Neither the transferor nor any listing or selling agent shall be liable for any error, inaccuracy, or omission of any information delivered pursuant to this article if the error, inaccuracy, or omission was not within the personal knowledge of the transferor or the listing or selling agent, and was based on information timely provided by public agencies or by other persons providing information as specified in subdivision (c) that is required to be disclosed pursuant to this article, and ordinary care was exercised in obtaining and transmitting the information.

(b) The delivery of any information required to be disclosed by this article to a prospective transferee by a public agency or other person providing information required to be disclosed pursuant to this article shall be deemed to comply with the requirements of this article and shall relieve the transferor or any listing or selling agent of any further duty under this article with respect to that item of information.

(c) The delivery of a report or opinion prepared by a licensed engineer, land surveyor, geologist, or expert in natural hazard discovery dealing with matters within the scope of the professional's license or expertise, shall be sufficient compliance for application of the exemption provided by subdivision (a) if the information is provided to the prospective transferee pursuant to a request therefor, whether written or oral. In responding to that request, an expert may indicate, in writing, an understanding that the information provided will be used in fulfilling the requirements of Section 1103.2 and, if so, shall indicate the required

disclosures, or parts thereof, to which the information being furnished is applicable. Where that statement is furnished, the expert shall not be responsible for any items of information, or parts thereof, other than those expressly set forth in the statement.

Section 1103.5 – Limitation of Liability.

(a) After a transferor and his or her agent comply with Section 1103.2, they shall be relieved of further duty under this article with respect to those items of information. The transferor and his or her agent shall not be required to provide notice to the transferee if the information provided subsequently becomes inaccurate as a result of any governmental action, map revision, changed information, or other act or occurrence, unless the transferor or agent has actual knowledge that the information has become inaccurate.

(b) If information disclosed in accordance with this article is subsequently rendered inaccurate as a result of any governmental action, map revision, changed information, or other act or occurrence subsequent to the delivery of the required disclosures, the inaccuracy resulting therefrom does not constitute a violation of this article.

Section 1103.7 – Good Faith.

Each disclosure required by this article and each act that may be performed in making the disclosure shall be made in good faith. For purposes of this article, "good faith" means honesty in fact in the conduct of the transaction.

Section 1103.8 – Other Obligations.

(a) The specification of items for disclosure in this article does not limit or abridge any obligation for disclosure created by any other provision of law or that may exist in order to avoid fraud, misrepresentation, or deceit in the transfer transaction. The legislature does not intend to affect the existing obligations of the parties to a real estate contract, or their agents, to disclose any fact materially affecting the value and desirability of the property, including, but not limited to, the physical condition of the property and previously received reports of physical inspection noted on the disclosure form provided pursuant to Section 1102.6 or 1102.6a.

(b) Nothing in this article shall be construed to change the duty of a real estate broker or salesperson pursuant to Section 2079.

Section 1103.9 - Amendments.

Any disclosure made pursuant to this article may be amended in writing by the transferor or his or her agent, but the amendment shall be subject to Section 1103.3.

Section 1103.10 – Delivery of Disclosure.

Delivery of disclosures required by this article shall be by personal delivery to the transferee or by mail to the prospective transferee. For the purposes of this article, delivery to the spouse of a transferee shall be deemed delivery to the transferee, unless provided otherwise by contract.

Section 1103.11 – Authorization of Agent.

Any person or entity, other than a real estate licensee licensed pursuant to Part 1 (commencing with Section 10000) of Division 4 of the Business and Professions Code, acting in the capacity of an escrow agent for

the transfer of real property subject to this article shall not be deemed the agent of the transferor or transferee for purposes of the disclosure requirements of this article, unless the person or entity is empowered to so act by an express written agreement to that effect. The extent of that agency shall be governed by the written agreement.

Section 1103.12 – Multiple Agents.

(a) If more than one licensed real estate broker is acting as an agent in a transaction subject to this article, the broker who has obtained the offer made by the transferee shall, except as otherwise provided in this article, deliver the disclosure required by this article to the transferee, unless the transferor has given other written instructions for delivery.

(b) If a licensed real estate broker responsible for delivering the disclosures under this section cannot obtain the disclosure document required and does not have written assurance from the transferee that the disclosure has been received, the broker shall advise the transferee in writing of his or her rights to the disclosure. A licensed real estate broker responsible for delivering disclosures under this section shall maintain a record of the action taken to effect compliance in accordance with Section 10148 of the Business and Professions Code.

Section 1103.13 – Failure to Comply.

No transfer subject to this article shall be invalidated solely because of the failure of any person to comply with any provision of this article. However, any person who willfully or negligently violates or fails to perform any duty prescribed by any provision of this article shall be liable in the amount of actual damages suffered by a transferee.

Section 1103.14 - Definitions.

(a) As used in this article, "listing agent" means listing agent as defined in subdivision (f) of Section 1086.

(b) As used in this article, "selling agent" means selling agent as defined in subdivision (g) of Section 1086, exclusive of the requirement that the agent be a participant in a multiple listing service as defined in Section 1087.